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Calligraphy, Colour and Light in the Blue Qur'an

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The Blue Qur'an is one of the most mesmerising manuscripts produced in Islam. Its dyed pages of deep blue and gold script exude a sober magnificence of a kind rarely surpassed. Today, the most commonly held view is that this manuscript was produced for the early Fāṭimid court, before the conquest of Egypt in 358/969. However, in recent years our knowledge of early Qur'anic manuscripts, their calligraphy and the illumination that adorns their pages has greatly progressed. In the first part of this article, I will argue that the Blue Qur'an is in fact much earlier than has hitherto been recognised and dates to the early °Abbāsīd period. This will be the occasion to posit some elements of chronology for early Qur'anic scripts. Once this new framework has been set for the manuscript, I will move on to explore the origin of its colour scheme and its different layers of meaning, between the practical, the temporal and the spiritual.¹

Physical features

When experienced directly, rather than in reproduction, the Blue Qur'an strikes one not only by its colour scheme, but also by its size: the largest published folios are about 31 cm high and 41 cm wide (fig. 1). There must have been around 600 such folios in the original manuscript.² One can only imagine the effect that its bound volumes would have produced when opened in front of contemporaries in their original setting. Today, about 100 leaves from this manuscript are dispersed between public and private collections worldwide, including 67 at the Musée de la Civilisation et des Arts Islamiques in Raqqāda, near Qayrawān (see Appendix Two).³

At the basis of the Blue Qur'an lie two exceptional scribal techniques: chrysography (Gr. 'gold writing') and the blue dye of the parchment. Chrysography is based on the use of gold powder as an ink pigment. Recipes for such inks are recorded in the manual on calligraphy written by the Zīrid ruler of central North Africa, Ibn Bādīs (d. 454/1062).⁴ They were used to write a number of extant early Qur'ans, to which we shall return, but what really sets the present manuscript apart is the combination of this technique with a dark blue dye: the few other dyed early Qur'anic fragments that survive have much more muted tones, such as light orange, and their calligraphy is in normal dark brown ink.⁵

The dye of the Blue Qur'an was, in all likelihood, based on a vegetal pigment: indigo.⁶ This can be made from a variety of plants. The most widespread species, *indigofera tinctoria*, is native to tropical or sub-tropical climates; it may be of Indian origin (the English name 'indigo', which comes from the Latin *indicum* and the Greek *indikon*, reflects this derivation).⁷ Other plants yielding the same dye also existed in the Islamic world, for example *isatis tinctoria* (Eng. 'woad'), which is native to the Mediterranean and West Asia.⁸ An awareness of geographical and botanical variety transpires from the textual sources that mention indigo. In *Firdaws al-ḥikma*, ʿAlī ibn Rabban al-Ṭabarī (d. ca 250/864) thus makes a distinction between two indigo-producing species from the shape of their leaves (these have not been precisely identified by modern scholarship).⁹ Woad was also mentioned in a fourth/tenth century Hebrew document from Qayrawān as a commodity imported from Egypt and otherwise known as 'Palestinian indigo'.¹⁰ Historians and travellers have left us several more accounts of indigo cultivation in Palestine, Egypt, the Yemen, Afghanistan and the Maghrib;¹¹ and other producing regions are likely to have existed. However in the current state of our knowledge, the plant used for a given manuscript cannot be determined on the basis of its finished dye.

Indigo was used in the Islamic lands as a medicinal plant, a skin ornament and a hair dye, but its primary realm of application lay in textiles. The leaves had to be fermented before they became a proper dyeing agent. The textile would then be dipped into a vat containing this substance and left to dry in the air to generate an oxidation that would make the blue colour come out.¹² Could a comparable technique have been used for the Blue Qur'an? Recent microscope observation of its parchment at x45 magnification by Kristine Rose, senior conservator at the Chester Beatty Library, has revealed that the blue is not a crust of pigment but consists of extremely fine crystals of blue colour: these recall the insoluble form of blue that materialises when a dye solution oxidises on exposure to air (a painted surface, by contrast, would have been particulate).¹³ The parchment is deeply saturated with blue, as is most evident in its damaged parts; the hue gradually becomes lighter the further one reaches below the surface. A painted pigment, by contrast, would have sat more superficially on the parchment. This gradation of colour thus seems to corroborate the idea of a dye: it could be the result of repeated dips into a vat, the standard technique used to obtain a darker colour in textiles. Several modern attempts to dye parchment in this manner have, however, suggested that this would cause it to shrink and crack to the point of being unusable.¹⁴ But in her recent experiments with purple, Inge Boesken Kanold has found that by using a cold vat, soaking the parchment in water with a drop of detergent before dipping and stretching it afterwards, excellent results could be obtained.¹⁵ A similar technique may well have been used for the Blue Qur'an. Its parchment then appears to have been sized and burnished with tremendous care, as

revealed by the even texture of its surface and, most of all, by its remarkably smooth and supple quality.

By looking at other physical features of the manuscript, it is possible to retrace the main steps of the fabrication process. After the large parchment leaves had been dyed, a fifteen-line text box grid was incised onto the page with a dry point. This grid served to indicate the position of the calligraphy to the scribe; as in the rest of the Kufic tradition, a remarkably stable ratio of text box width to height was applied throughout the manuscript.¹⁶ Once the pages had been thus prepared, they were written in gold by a calligrapher and each letter was outlined with a thin pen in dark brown ink.¹⁷ The verse divisions and other decorations were added at some stage in the process, whether by the scribes themselves or by specialised craftsmen. Finally, the leaves were assembled into quires and bound.

At least one full-page illumination from this manuscript has survived. It consists of a succession of rectangular borders with geometrical ornament – semi-abstract vegetal scrolls, interlaces – and a marginal palmette, all executed in gold.¹⁸ The text on the recto of this leaf ends with the first word of Q. 4:62; but, as noted by Tim Stanley, this initially continued overleaf, and the original text can still be seen underneath the present illumination. The juncture at which this change was effected may be significant: in one division of the Qur'an recorded by Ibn Abī Dāwūd al-Sijistānī (d. 316/929) on the authority of the Kufan scholar Yaḥyā ibn Ādam (d. 203/818), the first *sub*^c ('seventh') ends just one word before this breaking point, at the close of Q. 4:61.¹⁹ This alteration of the initial sequence of the text thus appears to reflect a reconfiguration of the manuscript, possibly from one bound volume into seven.²⁰

The Blue Qur'an, it should be added, was not an entirely unique phenomenon in the history of Qur'anic calligraphy. One folio written in gold Maghribī script of the seventh/thirteenth or eighth/fourteenth century on dark blue paper has recently entered the collection of Dar al-Athar al-Islamiyyah in Kuwait (fig. 2). Its sura marker brings together age-old interlace patterns with an imitation of classical Kufic. The decoration extends into the margin, with a leaf-shaped ornament of interwoven tendrils and palmettes. Notwithstanding the use of a more modern writing material, paper, these features suggest a distant link with the early Islamic period thereby opening the possibility of a broader context to which we shall return.

The Question of Origins

The first person to bring the Blue Qur'an to public attention in modern times was F.R. Martin, who had purchased some of its leaves in Istanbul. In a publication of 1912, he asserted that the manuscript had been commissioned by the °Abbāsīd caliph



Fig. 1: Folio from the Blue Qur’an (Q. 35:1–3), Raqqāda, Musée de la Civilisation et des Arts Islamiques, Rutbi 196 (31 × 41 cm)



Fig. 2: Folio from a Qur’an in gold script on blue paper (Q. 2:1–9), Kuwait, Dar al-Athar al-Islamiyyah, LNS323 MS (14.6 × 11.3 cm)

al-Ma'mūn (reg. 197–218/813–33) for the tomb of his father Hārūn al-Rashīd (reg. 170–93/786–809), in Mashhad; Martin also associated the colour blue with mourning.²¹

These assumptions, even though they had been formulated without any supporting evidence, were about to gain widespread acceptance when it became apparent that many leaves from the same manuscript belonged to the Great Mosque of Qayrawān. In the aftermath of the abolition of the *awqāf* by the young Tunisian Republic in 1957, these were moved to national collections in Tunis, notably the Bibliothèque Nationale de Tunisie and Institut National d'Archéologie (most of them have since been brought back to the Musée de la Civilisation et des Arts Islamiques in Raqqāda).

In 1976, leaves from Tunisian collections were displayed at the Festival of Islam, in London. During this event, visitors entering the British Library were informed that the Blue Qur'an was made in Iran in the third/ninth century, only to learn just across the Thames, at the Hayward Gallery, that it was from fourth/tenth-century Tunisia. This perplexing situation led Jonathan Bloom to write a series of articles in which he dispelled earlier misconceptions about the manuscript and proposed new hypotheses about its origin.²² His main conclusion was that this was an early Fāṭimid manuscript made in the Maghrib before the dynasty conquered Egypt in 358/969. A few years later, Tim Stanley added new observations about the manuscript and suggested that it may in fact have been produced at the Umayyad court of Spain, also in the fourth/tenth century.²³ More recently, Marcus Fraser has introduced a new variation on this group of interpretations by suggesting that it may have been produced in Sicily or North Africa under the Aghlabids or Kalbids.²⁴ These studies have firmly anchored the Blue Qur'an in a historical discussion of which the present article will be a continuation.

The rediscovery of the Tunisian folios was accompanied by that of an important document, published in 1956 by Ibrāhīm Shabbūh: the inventory written for the library of the Great Mosque of Qayrawān in 693/1294. This document notably listed a Qur'an:²⁵

... in seven *ajzā'*, in large format, written in gold, in Kufic script, on dark-blue (*akḥal*) parchment ... the *sūras* and number of verses and *aḥzāb* in silver, covered in tooled leather over boards, lined with silk.

The identification of this manuscript with the Blue Qur'an is not entirely obvious, as already pointed out by Stanley.²⁶ The text refers to a manuscript written in gold on dark blue parchment, but without stating the number of lines (a detail which may have belonged to a damaged fragment of the text). The information provided about binding cannot be proved or disproved; on the other hand, it is plausible, as we have seen, that by that point in time the manuscript was divided into seven *ajzā'*. While the Blue

Qur'an does have sura titles and verse markers in silver, the inventory specifically mentions that every *hizb*, corresponding to a sixtieth of the Qur'an, is indicated in this manner; but in the manuscript, silver rosettes appear much more frequently, at every tenth aya; the number of ayas was originally written within them (fig. 7).²⁷ Such a difference would not easily have escaped a cataloguer, if only because these medallions occur much more frequently than *hizb* markers.

The association of the inventory with the Blue Qur'an would therefore require us to ignore lacunae in the text and assume that an imprecision has slipped into its wording. Such a hypothesis is not altogether implausible. But even if we chose to accept it, this would not necessarily imply that the manuscript was made in North Africa, as the inventory was drawn up at a time when it was already centuries old. Qur'ans could travel across great distances in the medieval period, a fact illustrated by the specimens in Maghribī script that once belonged to the treasury of the Great Mosque of Damascus.²⁸ The inventory may or may not be a document on the later history of the manuscript, but in any case it cannot contribute to the question of its origin.

Several other Arabic texts have been brought into previous discussions of the Blue Qur'an. Bloom in particular gave references to historical sources which indicate that manuscripts written in gold belonged to the Fāṭimid treasury in Cairo in the fifth/eleventh century.²⁹ But these sources explicitly describe Qur'ans in the New Style or cursive, not Kufic; and the one reference to 'lapis lazuli' that they contain probably refers not to a dye but to a thin outline of the script.³⁰ Our main source of information, in the end, remains the manuscript itself, its calligraphy and its decoration.

Style of Calligraphy and Decoration

The script of the Blue Qur'an, labelled D.IV in Déroche's classification, lies at the threshold of several stylistic families.³¹ On the whole, it is close to the masterly D.I, which represents the peak of the Kufic tradition. But several of its letter shapes also appear as archaic in the context of the D group. One characteristic of this group is the curved lower return of independent *alif* (fig. 3); whereas in D.IV, this part of the letter is relatively flat, and markedly so in the Blue Qur'an, where its shape recalls that encountered in C.III (fig. 4). In D.I, D.II, D.III and D.V, initial *ʿayn* takes the form of an open hook with a more or less pronounced curve. But in D.IV, the upper part of this letter simply consists of a stroke placed at an acute angle to the line and which is either straight, as in B.I, or slightly curved, as in B.II. In some cases, including the Blue Qur'an, this upper stroke is slightly raised from the baseline, to which it is joined by a straight, oblique base, which makes it an intermediary form between those used in the B and D families.

Furthermore, in D.IV, *mīm* and *hā'* have shapes generally close to those encountered in other D styles, but which are distinguished by a tendency for the base of the letter to droop slightly below the line – a feature which, again, suggests a link with B.II.

Another remarkable trait of some manuscripts in D.IV, including the Blue Qur'an, is the special treatment of the word *Allāh*, whereby the successive letters follow a straight descending alignment.³² In the rest of the D group, by contrast, the downward progression tends to follow a succession of horizontal levels which is probably derived from the interline grid that lay at the basis of the script's codification (fig. 3).³³ The approach observed in D.IV finds a clear parallel in styles C.II and C.III, where the word *Allāh* almost comes to form a right-angled triangle.³⁴

D.IV is thus singled out within the D group by affinities of style with B.II and C.III. This link also extends to format and, in the case of the Blue Qur'an, decoration. Manuscripts in D.IV, C.II, C.III, and some specimens in B.II, are oblong and of large dimensions (20 × 30 cm and above), typically with thirteen to seventeen lines per page (figs 4 and 5); by contrast, smaller formats with fewer lines to the page dominate in the rest of the D group (fig. 3). The published sura markers of the Blue Qur'an consist of a thick horizontal gold band containing geometrical patterns and jewel-like touches of blue and red, and ending in a marginal finial (fig. 1).³⁵ These ornaments find a remarkable parallel in a Qur'an written in a style close to B.II, which also displays the slanting tall letters that were a trademark of the Ḥijāzī tradition, and may thus be relatively early within its scriptural group (fig. 5). The kinship of this manuscript with the Blue Qur'an is reinforced by the distinctive thinness of its sura bands, its extenuated letter strokes, large format and number of lines per page (sixteen, as opposed to fifteen in the Blue Qur'an). In more general terms, the Blue Qur'an shares the use of purely decorative sura markers with manuscripts in B.Ib, C.Ia, C.II, C.III and F.I, as well as some specimens in B.II.³⁶ By contrast, in the rest of D.IV and of the D group as a whole, the name of the sura is normally written in large script across the page, whether alone or within an ornamental band (fig. 3). The finials in the Blue Qur'an, with their branches in curlicue shape enclosing semi-abstract vegetal motifs, do employ a decorative language which finds a resonance in the D group, where similar motifs occasionally appear as an extension of sura titles in monumental script (fig. 3). In script and decoration, then, the Blue Qur'an represents a transitory stage, still anchored in the aesthetic of B.II, C.III and related styles, while also prefiguring the rest of the D group.

On the Dating of D.IV

With these elements in mind, let us turn to the complex question of chronology. It will be useful to proceed by reviewing the main types of evidence available in this respect.

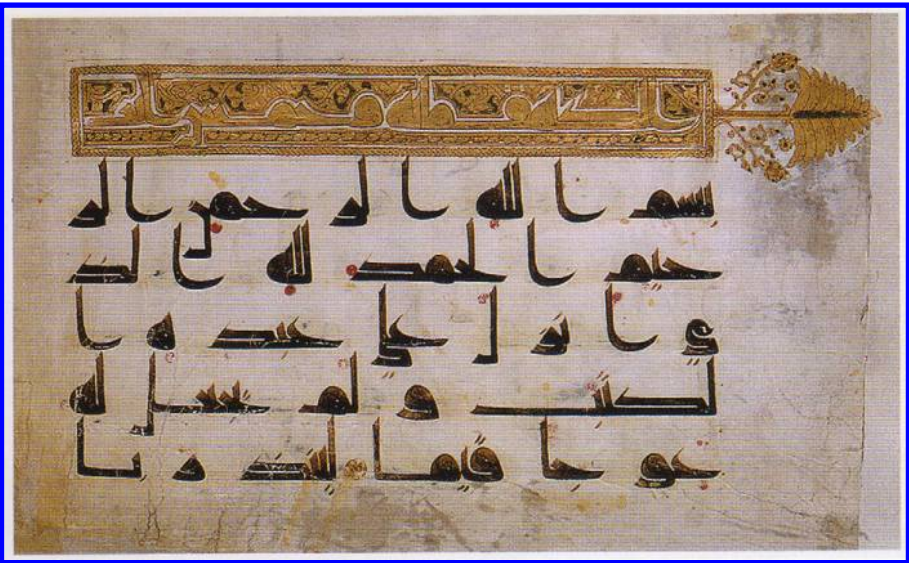


Fig. 3: Folio from a Qur'an in style D.I (Q. 18:1–2),
Dublin, Chester Beatty Library, Is. 1422 (18.5 × 26 cm)



Fig. 4: Folio from a Qur'an in style C.III (Q. 45:37–
46:10), London, Nasser D. Khalili Collection, KFQ45
(20.4 × 30.8 cm)

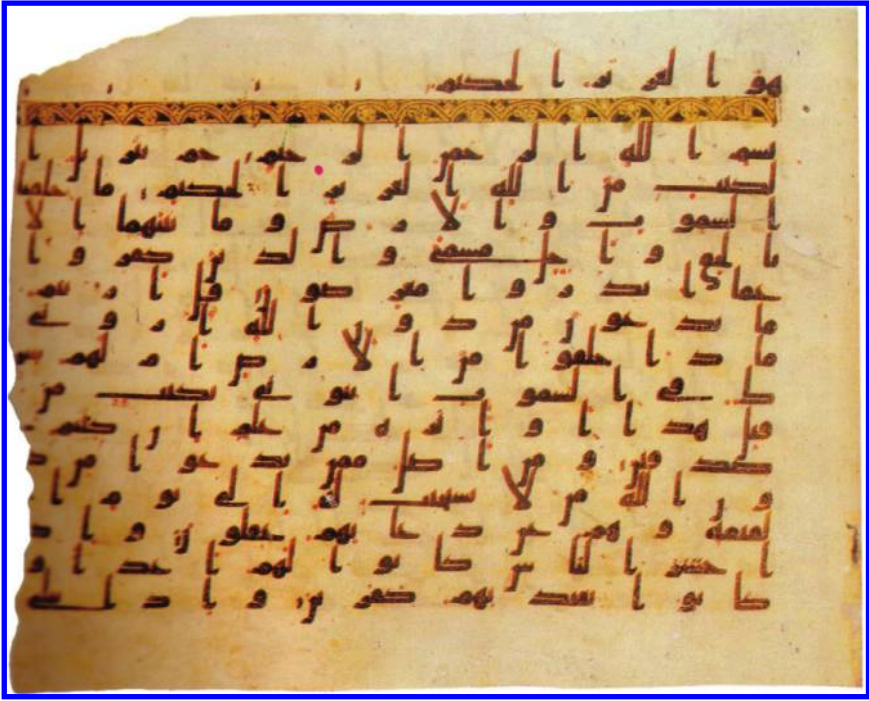


Fig. 5: Folio from a Qur'an in a style close to B.II
(Q. 45:37–46:7), private collection (21.5 × 28 cm)

These are: (1) Qur'ans with a *waqfiyya* or birth record; (2) dated *waqfiyyāt* in Qur'anic script; (3) dated inscriptions; and (4) carbon-dated manuscripts.

1. *Qur'ans with a waqfiyya or Birth Record*

A *waqfiyya* is an endowment deed making a manuscript the inalienable property of a mosque or religious institution. Because virtually every surviving early Qur'an has been repeatedly unbound and dispersed over the centuries, only a handful of these documents remain. Being a legal deed, a *waqfiyya* can, furthermore, be drawn up long after a manuscript was initially written: it will typically provide a mere *terminus ante quem*, rather than an actual production date, for a given manuscript. The same remark applies to the records of births that were sometimes added to the margins of Qur'ans to invoke God's protection for a child. The evidence of these two types that could be gathered from the published record is listed in table 1.³⁷ The conclusions that might be derived from it can be readily summarised: B.II was in existence before 229/844, D.I before 262/876, D.II before 267/881, D.III before 295/908, D.IV before 329/940 and

Style	Date	Dating evidence	Collection	Publication
B.II	Before 229/844	Birth record	Istanbul, Türk ve İslâm Eserleri Müzesi, SE 4019	Déroche 1989: 102
B.II	Before 249/863	Birth record	Istanbul, Türk ve İslâm Eserleri Müzesi, SE 10229	Déroche 1989: 102
D.I	Before 262/876	<i>waqfiyyât</i>	Istanbul, Türk ve İslâm Eserleri Müzesi and other collections	Déroche 1990–1
D.II	Before 267/881	<i>waqfiyya</i>	Cairo, Dār al-Kutub	Moritz 1905: plate 41
B.II	Before 270/884	<i>waqfiyya</i>	Cairo, Dār al-Kutub	Moritz 1905: plate 42
D.III	Before 295/908	<i>waqfiyya</i>	Raqqāda, Musée de la Civilisation et des Arts Islamiques	Shabbūḥ 1956: plate 3; Rammah 1997: 142
D.I	Before 298/911	<i>waqfiyya</i>	Dublin, Chester Beatty Library, Is. 1421; Istanbul, Topkapi Saray EH16 and Türk ve İslâm Eserleri Müzesi, 556	Déroche 1987–9: 349–50
D.Va	Before 299/912	<i>waqfiyya</i>	Istanbul, Topkapi Saray, A1	Déroche 1987–9: 350 and fig. 19
D.I	Before 300/914	<i>waqfiyya</i>	Paris, Bibliothèque Nationale de France, Arabe 358a	Déroche 1983a: no. 85
D.IV	Before 329/940	<i>waqfiyya</i>	Paris, Bibliothèque Nationale de France, Arabe 336	Déroche 1983a: no. 145
D.I	Before 337/949	<i>waqfiyya</i>	Istanbul, Türk ve İslâm Eserleri Müzesi, 4	Déroche 1983b: 150

Table 1: Specimens of Kufic script with a *terminus ante quem*⁴⁰

D.Va before 299/912.³⁸ But how long before? The answer to this question is far from obvious.

One situation, albeit unusual, is represented by the so-called ‘Qur’an of Amājūr’. This relatively small manuscript written in style D.I, with three lines to the page, has two extant *waqfiyyāt* whereby Amājūr, the ʿAbbāsīd governor of Syria (256–64/870–8) who rebelled against the caliphal authorities of Samarra, endows successive sections of the manuscript to an unnamed institution in Şūr (Tyre).³⁹ These two documents are separated by only a month in the year 262/876 and written in the same script as the text, which probably reflects the endowment of new volumes as they were being completed. This represents a rare case in which the script of the *waqfiyyāt* directly matches that of the text and in which their content gives us evidence of the actual production date.

By contrast with this exceptionally well-documented case, most extant *waqfiyyāt* are written in a different style than the rest of the text. For example, the *waqfiyya* of a manuscript in D.I dispersed between Istanbul and Dublin states:⁴¹

These sections (*ajzāʿ*), of which there are 30, were made a *waqf* at the congregational mosque in Damascus by ʿAbd al-Munʿim ibn Aḥmad, requesting the reward of God and seeking His satisfaction, in *Dhū'l-Qaʿda* of the year 298 [July 911].

The document is written in style E.I, a simplified variant on the D group. While this tells us that the manuscript was in Damascus by 298/911, it may still have been produced elsewhere, possibly decades earlier.

An earlier production can be confidently postulated for all the manuscripts in B.II that carry an indication of date. Two of them, listed above, carry birth records of 229/844 and 249/863 that have been added to their margin. The third, held at Dār al-Kutub al-Miṣriyya (Cairo), has a *waqfiyya* of 270/884 in an everyday script, clearly distinct from Qur'anic calligraphy, and which has been written on a fly-leaf pasted onto the inner board of the binding.⁴² There is every chance, in this case, that the manuscript predates the *waqf* deed. A similar conclusion applies to Arabe 336, the only published manuscript in style D.IV to survive with a *waqfiyya*. This time, the endowment text has been scribbled on the margin of folio 7r, which corresponds to Sura 37, in the middle of the original manuscript:⁴³

This section (*juzʿ*) was endowed to God (*ḥubisa li-llāh*). It shall be read in the congregational mosque (*jāmiʿ*) in Fustat ... ʿImrān ibn al-Tayyib [?] endowed it on 6 *Ṣafar* of the year 329 [10 November 940].

Having begun to write the text in the upper margin, the scribe had to curve the line down into the outer margin; this he did in an uneasy hand that is completely distinct from the main Qur'anic text. Our only documented chronological indication about D.IV is, therefore, simply another *terminus ante quem* that could be very remote from the actual production date.⁴⁴

2. Dated *waqfiyyāt* in Qur'anic Script

Several *waqfiyyāt* were themselves penned in a Qur'anic style about which they provide an absolute element of date. We have already mentioned the Qur'an of Amājūr, with its convergence of *waqfiyya* and main script; as well as the *waqfiyya* of ʿAbd al-Munʿim written in style E.I in 298/911. To the latter can be added a second document drafted the same year in the same hand, with exactly the same text, and now held at the National Museum of Damascus.⁴⁵ A third *waqfiyya* of the year 298/911 also bears the same text, word for word, but it is written in a style close to D.III.⁴⁶ These documents show that both D.III and E.I were being written at the turn of the fourth/tenth century.

3. Dated Inscriptions

The inscription of a text onto a hard surface, whether engraved on stone, on wood or set in mosaic, differs fundamentally in technique from the craft of scribes working with ink and pen. Yet in several of these texts, a convergence with manuscript calligraphy can be observed. The milestones of ʿAbd al-Malik, made between 65/685 and 85/705, display correspondences in their letter forms with Qur'ans in style A.I and Marcel 13, an early Umayyad manuscript with architectural decorations.⁴⁷ Two other inscriptions respectively made in 80/700 and 104/723 are written in an intermediary style between B.Ib and B.II.⁴⁸ Of equal importance are two monumental inscriptions carved in 167/784 by 'the people of Kūfa' on columns erected to commemorate spots visited by the Prophet at the Masjid al-Ḥarām, in Mecca (fig. 6).⁴⁹

The latter two inscriptions, again, display clear affinities with several known Qur'anic styles. Final *nūn*, with its thickened head and barely protruding lower return, recalls B.II or D.IV. *Alif* has a short, slightly curved lower return which loosely parallels B.Ib or B.II. The triangular endings encountered in many letters are reminiscent of C.Ib, C.II and C.III. Initial *ʿayn*, with its widely open curved hook, echoes C.II or F.I; the similarities with F.I extend to the triangular ending and circular body of final *mīm*, which bulges below the line; and the way medial *fāʾ* and *qāf* rest on a short vertical stem. But the script on these columns also remains distinct from the above styles: final *jīm* notably has a distinctive form, with a sinuous and oblique tail that ends in a point; so does medial *hāʾ*, which consists of two arched lines resting on a horizontal stroke and met at their junction by a curving vertical stroke. The Mecca inscriptions can fundamentally be read as an amalgamation of two stylistic strands that existed in the late second/eighth century, the B and C groups, from which D.IV and F.I were also derived.⁵⁰ It seems that the second century AH witnessed experimentations with early Kufic styles of which several composite styles were the outcome. Among these, D.IV had the most lasting posterity, with the growth of the D group in the third/ninth century.

4. Carbon-dated Manuscripts

Although based on a scientific method of analysis, this type of evidence is not without its inherent difficulties. Radiocarbon dating is founded on the measurement of the concentration in organic matter of carbon-14, a carbon isotope that results from the interaction of cosmic rays with nitrogen in the upper atmosphere.⁵¹ As a component of carbon dioxide, it then enters the biosphere through photosynthesis and the food chain. When, at death, a living organism, whether animal or vegetal, ceases to exchange carbon with the biosphere, this concentration begins to decrease by radioactivity at a rate which can be modelled – hence the possibility of estimating the time of death on this basis. However, a number of factors can affect the results of a radiocarbon analysis, for example contamination by other, more recent organic

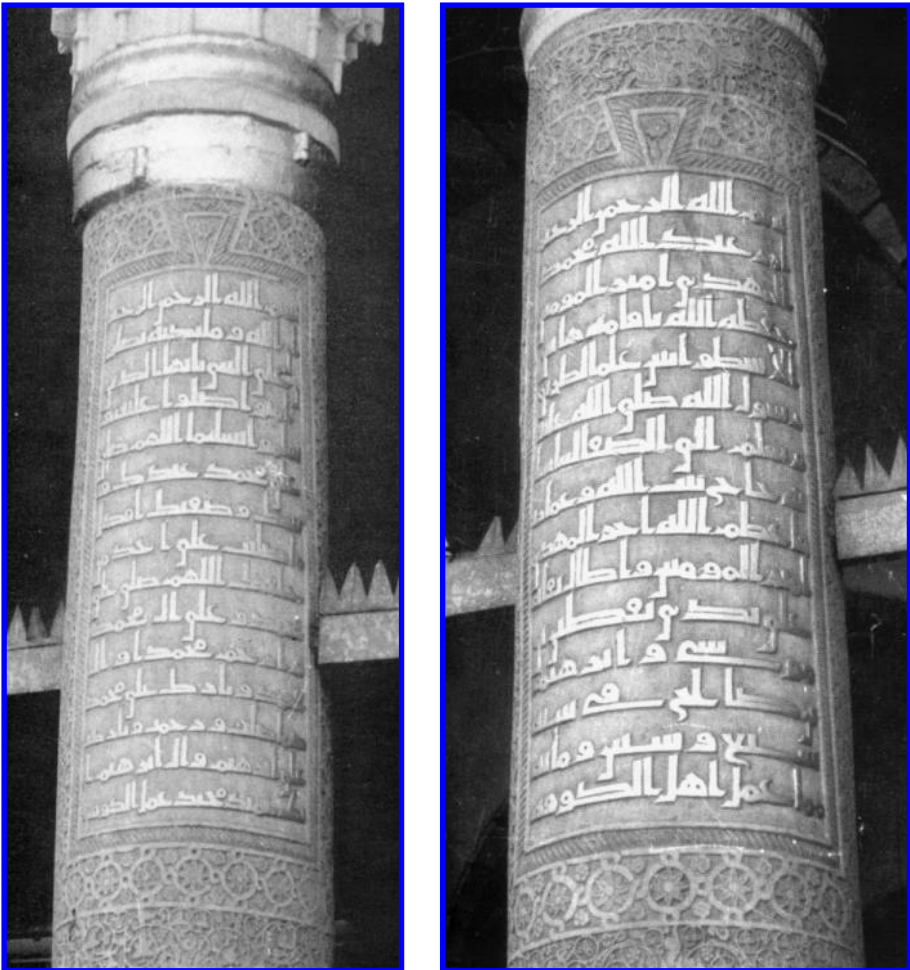


Fig. 6: Inscriptions from the Masjid al-Ḥarām (Mecca, 167/784)

material like glue or the paper casings used for manuscripts. Such materials can of course be cleaned off, and likewise calibration mechanisms have been devised to correct other distorting factors; nevertheless, the outcome of these datings ought to be interpreted critically, especially insofar as relatively narrow historical brackets are the desired outcome (beside the fact that results are expressed as statistical confidence intervals, an error margin of ± 50 years is the norm for most laboratories, though this can be reduced by further testing).⁵² This method of analysis can, in other words, confidently be taken as an indicator of whether an artefact is original or forged and as a very broad time measurement; but beyond that, its results require to be assessed in the light of other evidence – in the case of Qur'anic manuscripts, chiefly script, decoration and codicology.

A vertical Qur'an in a style close to B.Ib (St Petersburg, Institute of Oriental Studies, E20) has recently been carbon-dated to the range 775–995 AD with a 95.4% confidence interval.⁵³ Its script is still tied to the Ḥijāzī tradition, notably by the occasional slant of independent *alif* to the right; this is all the more significant if we remember that a variant on the same style which already leans more fully towards Kufic is attested in an inscription of the year 104/723.⁵⁴ The decoration of E20, with its simple repeat motifs clumsily drawn freehand, also reflects a pattern typical of Ḥijāzī, which was being superseded by more refined illumination in the early Umayyad period.⁵⁵ This manuscript represents one instance in which the results of radiocarbon analysis do not closely match the main features of the manuscript, which would suggest a date nearer the turn of the first century AH (late seventh to early eighth century AD).

Three other early Qur'anic fragments have, to the extent of my knowledge, been subjected to a radiocarbon analysis. One of them is the famous Umayyad Qur'an with architectural decorations discovered in Sanaa and written in style C.Ia: a carbon-dating has pointed to a date range between 657 and 690 AD and a chemical test has suggested a date between 700 and 730 AD; unfortunately, no detailed results of either test have been published.⁵⁶ The broad time range that they point to is nevertheless corroborated by the manuscript's illumination, which clearly points to the Umayyad period.⁵⁷ Recently, another C.Ia manuscript of giant dimensions written in the same style has been carbon-dated to the range 610–770 AD with a 95.4% confidence interval.⁵⁸ The width of this fragmentary page reaches 51.5 cm and its height 25.5 to 27.3 cm, with thirteen to fourteen extant lines of calligraphy. Its original format must have resembled that of a leaf which went through a London auction house in 2004, with its nearly square format (now 49.6 × 53.3 cm) and 25 lines of text.⁵⁹ Finally, a leaf of equally large dimensions, this time written in a style close to B.II with twelve lines of text, has been carbon-dated to the range 595–855 AD with a 95% confidence interval.⁶⁰

It is worth opening a short parenthesis, at this juncture, about the latter fragment, which belongs to a larger group of giant leaves measuring about 54 × 62 cm with 12 lines to the page. Some of these leaves were written in C.Ia and others in two closely related hands, one of which leans towards B.II and the other to D.IV.⁶¹ Despite the clear differences in their letter shapes, these pages are visually akin, as they share the same stroke size, a nearly square text box format and the same square verse separators. This close convergence suggests that they are contemporaneous, and may have initially belonged to a manuscript or group of manuscripts consciously bringing together different Qur'anic styles. Several of the sura decorative bands have architectural motifs which, despite a relatively awkward execution, indicate a period not so distant from the Umayyads.⁶² Given their massive format and immense cost, these leaves are likely to have formed part of an official commission, either in the late

Umayyad or the early ʿAbbāsīd period. One cannot but recall the assertion by al-Nadīm that under the reign of Hārūn al-Rashīd, Khashnām of Basra wrote '*alifs* one cubit high'.⁶³ The most important conclusion, from our perspective, is that D.IV had a period of overlap with B.II and C.Ia.

The evidence discussed so far thus shows that:

- (i) Styles C.Ia, B.Ib and B.II were in existence by the Umayyad period;
- (ii) C.Ia, B.II and D.IV were being written contemporaneously at one point in time;
- (iii) Experiments of the type that gave rise to styles F.I and D.IV were being undertaken in the second half of the second/eighth century;
- (iv) D.I, the classical form of D, was being written in 262/876;
- (v) D.III and E.I were being written in the late third/early tenth century.

Given its position at the confluence of B.II and C.III, D.IV is most likely to have emerged in their wake, and before the rise of D.I, of which it is a stylistic precursor. The script of the Blue Qur'an is thus in all probability a product of the period between the mid-second and early third century AH, i.e. the second half of the eighth to first half of the ninth century AD. This dating on the basis of script is confirmed by the links observed earlier between the illumination of manuscripts in B.II, C.III and D.IV; and by the sura markers of the Blue Qur'an, which place it at the threshold of the B, C and D groups.⁶⁴

The Silver Ornament

The script and decoration of the Blue Qur'an thus point to an early ʿAbbāsīd date, and several additional factors make it difficult to envisage that this manuscript may have been made after the third/ninth century. The fourth/tenth century was a turning point in the history of Arabic calligraphy, successively witnessing the decline of Kufic, the rise of an angular aesthetic of the script called the 'New Style' by Déroche and the emergence of a novel approach to cursive scripts heralded by the famous Qur'an of Ibn al-Bawwāb, written in the year 391/1000.⁶⁵ In the same period, Qur'anic orthography and notation became increasingly comprehensive, marking the fruition of a process that was already well underway in the third/ninth century.⁶⁶ The script of the Blue Qur'an, its sura markers, the sparse notation of its diacritics and its lack of vocalisation all appear as complete anachronisms in this perspective.⁶⁷

The silver ornament is another element that runs against the possibility of a fourth/tenth-century date. It consists of rosettes that separate ayas and, in the margins, medallions and sura titles. Because of the chemical properties of silver, it has largely been oxidised throughout the manuscript, but it can nevertheless be studied, at least in places. The rosettes and medallions are in a different ornamental style than the rest of

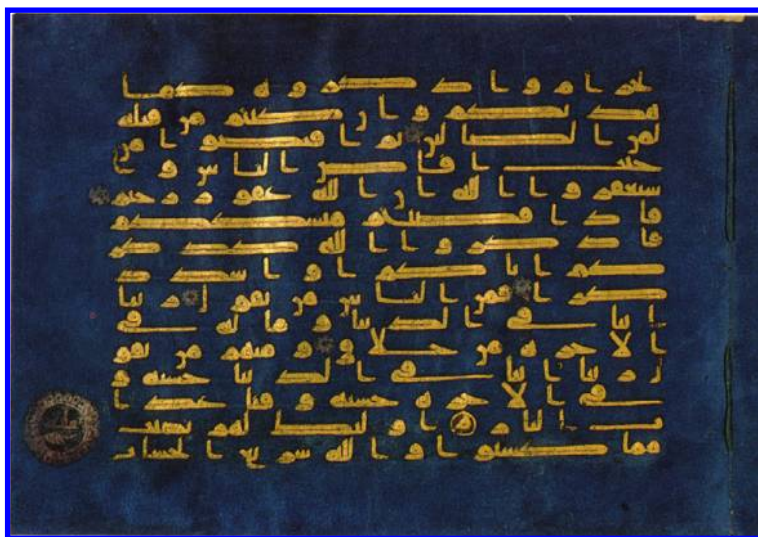


Fig. 7: Folio from the Blue Qur'an with decorative devices (Q. 2:196–8), Riyadh, Rifaat Sheikh al-Ard Collection (29 × 40 cm)

the manuscript: the circular borders with little dotted cells and the way little palmettes hang from these borders recall Qur'ans in D.Va – a late stage of evolution within the D group which has marked affinities with the New Style.⁶⁸ The small verse rosettes often fit uncomfortably between words or have been relegated to the margins because no space was left for them in the main text (fig. 7). This suggests that they did not belong to the original design; indeed, Stanley's observation of the text below the full-page illumination under ultra-violet light has revealed that it does not contain any of these signs.⁶⁹ This illumination itself, with the undulating vine scrolls of its frame and stylised pointed leaves of its marginal palmettes, finds its closest parallels in manuscripts written in D.III and, to a lesser extent, D.Va, which points to a date between the late third/ninth and the fourth/tenth century.⁷⁰

Throughout the manuscript, silver medallions signalling every tenth aya in full words are placed in the outer margin, at the same level as the *abjad* signs which provide exactly the same counts, but in letter numerals, within the main text (fig. 7). The rationale for this duplication will soon become apparent, but we can already note that among these two types of tenth-verse markers, the *abjad* signs are most likely to be original since, unlike for the rosettes, space has systematically been left for them while writing the text, with which they are also stylistically consistent. The type of calligraphy used in the silver sura titles, on the other hand, differs from that of the text: among the handful of letters in published examples, the body of final *nūn*, with its uniform thickness and relatively long lower return and the curve in the shaft of *kāf* reflect the



Fig. 8: Detail of a folio from the Blue Qur'an with silver sura title, private collection (page width 29.9 cm)



Fig. 9: Folio from a Qur'an in the New Style with sura title in style D.I and marginal *juz'* marker (Q. 6:165–7:3), Kuwait, National Museum, al-Sabah Collection, LNS65 MS (13.3 × 19 cm)

imprint of D.V (fig. 8). The position of these titles in the margin represents a break from the Kufic tradition, where sura titles are always written as a horizontal line within the limits of the text area. This probably reflects, again, lack of space in the original design. The formula adopted was perhaps derived from the convention, in the New Style, of marking a new *juz'* in this format, though in these cases the standard convention of inserting sura titles within the main text was simultaneously respected (fig. 9).⁷¹

Put together, the above evidence suggests that the silver ornament was a later addition to the manuscript, probably introduced between the late third/ninth and the fourth/tenth century.⁷² The Blue Qur'an appears to have been 'modernised' in that period through the introduction of features – sura titles in calligraphy, decorative verse rosettes, medallions with verse counts in full letters and the division of the manuscript

from one into several volumes – which had, by then, become standard features of Qur’anic manuscripts.

The *abjad* Notation System

The early ‘Abbāsid date of the Blue Qur’an also forces us to reconsider the question of its origin. There were, in classical Islam, an ‘eastern’ and a ‘western’ version of the *abjad*, the mnemonic ordering of the Arabic alphabet. Each letter was also associated to a numerical value, and numbers could be noted down by combining them.

90	80	70	60	50	40	30	20	10	9	8	7	6	5	4	3	2	1	
ص	ف	ع	س	ن	م	ل	ك	ي	ط	ح	ز	و	ه	د	ج	ب	ا	E
ض	ق	غ	ص	ن	م	ل	ك	ي	ط	ح	ز	و	ه	د	ج	ب	ا	W

1000	900	800	700	600	500	400	300	200	100	(ctd.)
غ	ظ	ض	ذ	خ	ث	ت	ش	ر	ق	E
ش	غ	ظ	ذ	خ	ث	ت	س	ر	ق	W

Table 2: The ‘eastern’ and ‘western’ *abjad* letter numerals

The two versions of the *abjad* differed in the order, hence the value, of some letters (highlighted in bold in table 2). The most significant variations, from the perspective of Qur’anic manuscripts, are:⁷³

- The use of *sīn* (east) or *ṣād* (west) for 60
- The use of *ṣād* (east) or *ḍād* (west) for 90

The Blue Qur’an follows the ‘Maghribī’ convention, as first noted by Bloom, and this has been interpreted as an indication of its western origin.⁷⁴ Yet behind the name of this letter order lies a more complex reality. This was, in fact, the earliest version of the Arabic *abjad*. It was superseded, probably in the third/ninth century, by a notation which came to prevail in the central and eastern Islamic lands (including Egypt). As the older *abjad* remained current in the Maghrib long after it had died out in the rest of the Islamic world, it became associated with this region, while the dominant system became known as ‘eastern’.⁷⁵

The exact time of emergence of the ‘Maghribī’ *abjad* is unknown. Its roots are likely to be pre-Islamic, as four of its five distinctive features appear in an inscription in Hismaic (an Ancient North Arabian script formerly known as ‘South Safaitic’) discovered at Khirbat al-Samrā³, in modern Jordan, which must be earlier than the mid-fourth century AD.⁷⁶ This version of the *abjad* was also already in place as a numeration system by the early Umayyad period: in Marcel 13, gold letters outlined in dark brown are thus employed to give the number of every fifth aya according to this convention (fig. 10).⁷⁷ The distinctive shape of these gold *abjad* letters and the space left for them between ayas leaves no doubt that they were part of the original

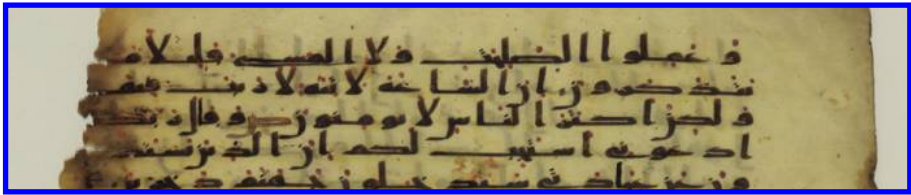


Fig. 10: Detail of St Petersburg, National Library of Russia, Marcel 13, fol. 12v (Q. 40:58–60, page width *ca* 30 cm)

manuscript. Incidentally, judging from its decoration, textual variants and verse count, Marcel 13 is most likely to have been made in Greater Syria (indeed, the manuscript probably predates the Muslim conquest of Spain).⁷⁸ This clearly illustrates the fact that the *abjad* system should be dissociated from the question of geographical origin for this early period.

Further evidence of the early date of the Maghribī letter order appears in the *Fihrist*, where al-Nadīm cites an explanation of the *abjad* by Hishām ibn Muḥammad al-Kalbī (d. *ca* 204/819) in which this variant is used.⁷⁹ In the *Muḥkam fī naqṭ al-maṣāḥif*, al-Dānī (d. 444/1053) cites another such explanation by Quṭrub, the second/eighth-century grammarian and lexicographer from Basra, again based on the ‘western’ *abjad*.⁸⁰ The ‘eastern’ *abjad* is first attested in the two earliest datable Islamic astrolabes, both made by ‘Khaffī, the apprentice of Ibn ‘Isā’ around the middle of the third/ninth century, and its occurrence becomes common thereafter.⁸¹ The evidence at our disposal thus points to the existence of the ‘western’ or ‘Maghribī’ *abjad* alone in the first/seventh to second/eighth century, before it started being superseded by the ‘eastern’ *abjad* in the third/ninth century; this conclusion is corroborated by studies on the related issue of phonetic shifts in the Arabic language in the early Islamic era.⁸²

Manuscripts of the Umayyad and early ‘Abbāsīd periods might thus be expected to use the old notation system, and this is exactly what can be observed not only in Marcel 13 and the Blue Qur’an, but also in those manuscripts written in styles B.II and C.III which display verse-numbering.⁸³ Qur’ans in the rest of the D styles, which are more likely to belong to the third/ninth or early fourth/tenth century, sometimes employ the letter *sīn* to denote 60, though it had become more common, by that stage, to record the number of ayas as a full word (e.g. *sittūn* for 60), probably to avoid any confusion (fig. 11).⁸⁴

The convention of writing verse numbers as full words was carried into NS and early cursive Qur’ans, where rosettes containing these words are typically placed in the margin of the manuscript; in some cases, like the Palermo Qur’an (372/983), a small ornamental rectangle has simply been inserted within the text.⁸⁵ The *abjad* notation, on the other hand, is virtually absent from Qur’ans of this period.⁸⁶ The decoration



Fig. 11: Folio from a Qur'an in style D.Vc (Q. 23:51–2), Kuwait, Dar al-Athar al-Islamiyyah, LNS2 CA a (19.7 × 31 cm)

added to the Blue Qur'an around the turn of the fourth/tenth century reflects this trend: at that stage, marginal silver medallions were added to give in full words information already provided by the original *abjad* signs within the text, as if the latter had somewhat become outdated.

Letter numerals did continue to be used for astrolabes long after they were abandoned in Qur'anic manuscripts; interestingly, their evidence suggests the older *abjad* was not entirely forgotten in the lands east of Egypt. Al-Bīrūnī (d. ca 442/1050), who lived most of his life between Iran and Central Asia, thus wrote about *abjad* numerals:⁸⁷

Among astronomers, there is no disagreement as to their use, but there are perverse people outside the profession who put *ṣaʿfaḍ* for *saʿfaṣ*, thus making *ṣ* 60 and *ḍ* 90, and *qarasat* for *qarashat*, basing their objections, some on linguistic grounds, others on interpretations that serve their own convictions (*taʿwīlāt li-aghṛāḍ fī iʿtiqād*); but this is nonsense.

The primitive *abjad* may have acquired, by then, a special aura owing to its links with the early Islamic period. At any rate, the type of *abjad* used in a manuscript cannot serve as a reliable indication of its geographical origin prior to the fourth/tenth century; and even for later periods, this feature ought to be interpreted with

caution. The most important consequence, for our present purposes, is that the region of production of the Blue Qur'an cannot be determined on this basis.⁸⁸

Origin of the Colour Scheme

The Blue Qur'an bears a noted resemblance to the most precious of early Bibles, written in gold or silver on purple parchment.⁸⁹ The oldest surviving specimens date to the sixth century AD: one of these, the Sinope Gospels, was written in gold, but most, at the image of the Rossano Gospels (fig. 12), had silver script with touches of gold for titles and/or the *nomina sacra*.⁹⁰ These early Bibles were written in Greek or Latin; manuscripts of the eighth to tenth centuries AD attest to the continuation of the same tradition in Byzantium and Western Europe at the apogee of 'Abbāsid power.⁹¹ For reasons which will soon become apparent, the same colour scheme was also used for imperial edicts and correspondence. The reception of one such letter was documented at the Muslim court of Spain in the fourth/tenth century.⁹² In the material record, two diplomata emanating from the Ottonians, a successor state of the Carolingians, which are respectively dated 962 and 972 AD, survive.⁹³ Throughout this whole period precious gifts were widely exchanged between the Byzantine, Carolingian and 'Abbāsid courts.⁹⁴ Yet despite these obvious points of contact, difficulties arise when one tries to see this category of objects as the direct source of inspiration for the Blue Qur'an.

Purple dyes were made from the glandular secretion of the murex, a sea snail which lives on Mediterranean shores. This secretion can naturally give rise to hues ranging from light green through dark blue to deep purple red.⁹⁵ Within this array of colours, the makers of early Bibles had a definite predilection for reddish hues, with rare and relatively late exceptions.⁹⁶ The Blue Qur'an, by contrast, has a relatively stable dark blue hue, with slight variations of intensity. Its colour scheme is fundamentally defined by the strong contrast created by the juxtaposition of this ground with the brightness of gold script, as opposed to a relative harmony of tones ranging from reddish brown to gold or silver in purple Bibles. This difference would have been perceived even more acutely at a time when, as we shall see, brightness and darkness were fundamental aspects of colour perception.

Since the apogee of Rome, purple had been a prerogative of the imperial household, a status it retained after the division of the Roman empire into East and West. So intimate was this bond that the Byzantine emperor was known as *porphyrogenitus*: 'born in the purple'.⁹⁷ With the Christianisation of the empire, this connotation gradually extended to Christ the King, who is consistently represented in purple garb, often with touches of gold, in the iconography of this period, for example in the mosaics of Christ enthroned at the churches of San Apollinare Nuovo, San Vitale (both at Ravenna) and of Euphrasius (Poreč), all of which date to the sixth century

AD.⁹⁸ In the same period, Paulus Silentarius described an ornate altar cloth with the figure of the Pantocrator woven in golden and silken thread over a purple ground at Hagia Sophia (Constantinople).⁹⁹ The reddish hues of purple also opened the door to frequent associations with the flesh and blood of Christ. Living under Umayyad rule, John of Damascus (d. ca 749 AD) thus exalted the Virgin for weaving Christ's purple robe with her virginal blood, and also portrayed her as the purple cloth of his divinity. In his *Homilies*, Photius (d. ca 893 AD), patriarch of Constantinople, wrote about Mary:¹⁰⁰

Mayest thou rejoice, palace not built by hand, in which the King of glory has put on our garment, dyed red with thy virginal blood like imperial purple.

His contemporary Agnellus commented on the above-mentioned mosaics at San Apollinare: 'He who was before all time is dressed in a purple robe and by this He signifies that He was born a King and that He suffered'.¹⁰¹ Godescalc, the scribe of a Gospels book made in 781–3 AD for Charlemagne, also compared, in the dedicatory poem for this manuscript, the purple of its leaves to the 'blood' of Christ and the 'colour of roses'; while also linking the gold of the script to the 'radiant virginity of the heavens' and to 'divine light'.¹⁰² So widespread were these royal and religious connotations that they are likely to have been known, at least partly, in the Islamic world; writing about the murex snail, Ibn Juljul (b. 332/944), for instance, noted that only the Byzantine emperor was allowed to wear purple.¹⁰³ Such layers of meaning may have presented an obstacle to the adoption of the colour purple in Islam, particularly for the Qur'an.

Another factor could notionally have been invoked to explain the discrepancy between these two types of manuscript: economy. The prime region for the harvest of murex in the ancient world, the coast of Tyre in modern Lebanon, lay at the heart of the Islamic empire, and the shell was commonly available throughout the Mediterranean. The scribes of the Blue Qur'an could therefore theoretically have used this primary material, instead of which they chose a vegetal dye, indigo, which was itself a luxury commodity, but probably less expensive than purple (the fantastic quantities of murex sometimes put forward in the modern literature about this dye might, however, need to be revised in the light of recent experiments).¹⁰⁴ Yet, even in its present form this manuscript had already consumed immense resources: the size of the pages and the thick strokes of the calligraphy suggest, for example, that parchment and gold were used more lavishly than in most purple Bibles, which are smaller and have thinner script; countless hours of labour must also have gone into the meticulous preparation of the leaves, the execution of the calligraphy and the outline of each letter in brown. The cost of substituting one expensive raw material for another seems unlikely to have acted as a limiting factor in the colour scheme of this Qur'an.

Closer imitations of purple could, in fact, have been achieved even with lesser means, had this been the intent. Mid-range textiles and Byzantine silks presented to foreign dignitaries are known to have sometimes been dyed with a mixture of madder and indigo to produce such imitations.¹⁰⁵ The application of a similar principle to a manuscript is illustrated by Arabe 389–92 (Bibliothèque Nationale de France), a Qur'an written around 807/1405 in silver Maghribī script.¹⁰⁶ Its paper leaves were dyed in a range of reddish to brown hues; but despite a clear visual affinity with the natural variegation of purple, recent analyses have indicated that this substance was not part of the dyeing agent, which was probably based on less costly organic dyes.¹⁰⁷ The makers of the Blue Qur'an could likewise have turned to vegetal pigments to recreate a 'purple effect'. But they did not, probably because they had their eyes set on a different model.

The earliest documented instances of gold on blue in Islam predate the Blue Qur'an by about a century. The mosaic inscriptions at the Dome of the Rock (Jerusalem, 72/692) are set in gold against a dark green ground which verges on dark blue; those at the Umayyad mosques of Damascus and Medina were described in Arabic sources as being written in gold on dark blue; the latter colour scheme is also that of a recently discovered mosaic from Baysān, in Palestine, written in the name of Hishām (*reg.* 105–25/724–43).¹⁰⁸ The copper plaques at the Dome of the Rock, which also date to the foundation of the building, have gold letters executed in *repoussé* over a dark blue ground, which makes them come even closer to the colour scheme of the Blue Qur'an; given that their colours are painted, we cannot be absolutely certain that they are original, though this does seem likely in the context of their building.¹⁰⁹ The rise of the Kufic tradition, in the same period, owed much to similar transfers of designs across different media – coinage, milestones, and most notably from the type of monumental mosaics just mentioned to manuscripts.¹¹⁰ Given this well-attested versatility of script, it is conceivable that Qur'ans in gold on blue had started to be produced under the Umayyads, though in the absence of any direct evidence, this idea remains speculative.¹¹¹

The roots of the above Umayyad inscriptions can, in turn, clearly be traced to Byzantine monumental inscriptions, in a pattern of assimilation and creative transformation that is a benchmark of much Umayyad art.¹¹² By the days of Hishām, the underlying aesthetic seems to have been fully appropriated in an Islamic context, so that it was used not only for inscriptions in major mosques but also, as at Baysān, to commemorate the completion of a market. This Umayyad tradition was familiar to the early 'Abbāsids who, as we shall see, perpetuated it in their patronage; it appears as the most plausible source of inspiration for the Blue Qur'an, whether the first manuscripts of this kind were produced under the Umayyads or their successors. If purple Bibles played any role in this process, it seems to have been more as a background element than a driving rationale.

Technical aspects of the Blue Qur'an seem to tally with this idea. Its makers chose a type of dye not attested for parchment before Islam, which they combined with a distinctive approach to chrysography. Whereas in purple Bibles the letters were simply written in gold or silver on the dyed parchment, here they are outlined in dark brown ink – a practice which is common to the whole of early Qur'anic chrysography (fig. 13).¹¹³ By the fourth/tenth century, this convention had become so well established that it was imitated in the mosaic inscriptions at the Great Mosque of Cordoba (fig. 14). Its roots can again be traced to the early Umayyad period, with the gold letters that give verse counts in Marcel 13 (fig. 10). It is likely to have first emerged in manuscripts which, like Marcel 13, have plain parchment, for in these cases it substantially enhances legibility. In the Blue Qur'an, by contrast, its utility is limited by the fact that the darkness of the dye largely suffices to make the writing stand out. The combination of this technique and this dye, in other words, seems to reflect the elaboration of tools to write a manuscript in gold on dark blue within the context of the Islamic scribal tradition.

ʿAbbāsīd Gold on Blue

Few monumental inscriptions of the early ʿAbbāsīd period are preserved; and though many more are recorded in texts, the authors most often restrict themselves to content at the expense of physical form. Even so, the little that can be gathered from these sources is meaningful. In his history of Mecca, al-Azraqī (d. 222/837) records that in 137/754, al-Manṣūr, the founder of Baghdad, had the Maṣjid al-Ḥarām enlarged and decorated with mosaic. This type of decoration was a legacy of Umayyad times, having been introduced at that sanctuary by al-Walīd (*reg.* 86–96/705–15).¹¹⁴ Al-Manṣūr's work was commemorated by a pious mosaic inscription bearing his name, but executed in black on a gold ground.¹¹⁵ This apparent subversion of the earlier colour scheme may be related to the recent overthrow of the Umayyads by the ʿAbbāsīd revolution, which had heralded black as its rallying symbol.¹¹⁶ But full-fledged continuity with the recent Umayyad past was soon to reemerge under the new regime. In his history of Medina, Ibn Zabāla (second/eighth century) reported the presence of inscriptions from the reign of al-Mahdī (*reg.* 158–69/775–85) on the gates of the Prophet's mosque in mosaic ornament 'like al-Walīd had done', which may well refer to gold on blue.¹¹⁷ The same author also reported the following, which his teacher Mālik ibn Anas (d. 179/796) had once told him about this mosque:¹¹⁸

Al-Mahdī sent precious Qur'ans (*maṣāḥif laḥā athmān*) there. These were placed in a box (*ṣundūq*) and al-Ḥajjāj's Qur'an was removed so that they could be placed to the left of the pole (*sāriya*). Pulpits (*manābir*) were installed on which they would be read.



Fig. 12: Folio from the Rossano Gospels (sixth century),
Rossano (Calabria), Museo Diocesano (30.7 × 26 cm)

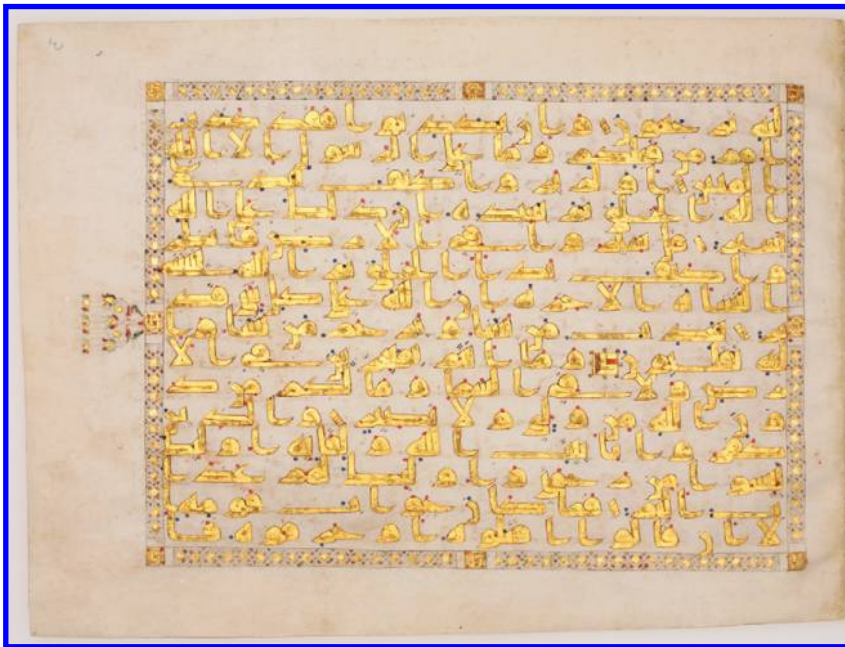


Fig. 13: Folio in D.IV belonging to the same manuscript as
Nuruosmaniye 27 (Q. 29:17–24), London, Nasser D.
Khalili Collection, KFQ52, fol. 4a (27.5 × 36.8 cm)

The pole in question appears to have indicated the location of the Prophet's tomb within the sanctuary. The older Qur'an of al-Ḥajjāj, the passage continues, 'was carried in its box and placed by the column on the right of the *minbar*'.¹¹⁹ Another early writer, Ibn Shabbah (d. 262/878), corroborates this information by mentioning that a Qur'an sent by al-Mahdī was still read at the Prophet's mosque in his day, and that the Qur'an of al-Ḥajjāj was kept in a box by the *minbar*.¹²⁰ The latter manuscript had been sent some eight decades earlier by al-Ḥajjāj ibn Yūsuf al-Thaqafī, the Umayyad governor of the eastern provinces (75–95/694–714), as part of a broader programme of official commissions of monumental Qur'ans.¹²¹ It used to be stored in a box during the week then, according to Ibn Zabāla (again, citing Mālik), 'opened on Friday and Thursday, and people would recite from it for the morning prayer'.¹²² The 'precious' Qur'ans with which al-Mahdī replaced it were also kept in boxes, presumably ornate chests, and dedicated pulpits (here called *minbar*, as opposed to the later term *kursī*) were provided for their recitation, which suggests a general continuity of practice with the Umayyad period. These manuscripts appear to have been placed at the heart of the sanctuary, in the area between the Prophet's tomb and his *minbar*, a few steps away from the *qibla* wall and *miḥrāb*, and to have been sequentially stored, laid open and read in this setting on given days of the week.¹²³

Mālik ibn Anas, the source of Ibn Zabāla's information, was amongst the most respected inhabitants of Medina in that period. He is reputed to have opposed the practice of reading from Qur'an manuscripts at the mosque and of decorating *qibla* walls with Qur'anic inscriptions.¹²⁴ In his legal writings, he also stated that 'Qur'ans should not be written in gold, divided into tens using it [gold] or embellished'.¹²⁵ These prescriptions are diametrically opposed to the Blue Qur'an, its gold script, ornament and the *abjad* notation of its every tenth aya. Manuscripts such as this – or, to give another example, Nuruosmaniye MS 27, written in gold D.IV over plain white parchment within a rectangular illumination frame (fig. 13) – were probably the very kind of ʿAbbāsīd imperial commissions which Mālik had in his sights when he formulated these opinions.¹²⁶ These Qur'ans appear to have been part of an orchestration of mosque ritual which used architectural ornament, particularly mosaic, as a foil – and soon attracted the criticism of religious scholars.

The use of gold on blue finds a broader resonance in the early ʿAbbāsīd period. Ibn Rusta noted, during his visit to the Prophet's mosque in 290/903:¹²⁷

On the interior surface of the wall between the gate of the Prophet, may God bless him and grant him peace, and ʿUthmān's gate is written in mosaic between it¹²⁸ and the marble [cladding]: 'This was ordered by the servant of God Hārūn, Commander of the Faithful, may God prolong his life, under the direction of (ʿala yaday) Ibrāhīm ibn

Muḥammad, may God guide him, and is the work of the Jerusalemites
(*ahl bayt al-maḡdis*).'

This inscription commissioned by Hārūn al-Rashīd thus belonged to the sanctuary and was again written in mosaic. Although its colours are not described, we do learn that it was executed by artisans from Jerusalem: greater Syria had probably remained, as in Umayyad times, the natural home of this craft within the Islamic empire. A few decades later, al-Ma'mūn must have drawn from the same pool of craftsmen when he altered a passage of the original Umayyad mosaic inscription at the Dome of the Rock, again in gold on blue, a process also repeated in the copper plaques.¹²⁹

One might wonder whether the colour scheme of these specific inscriptions had resulted from the necessity to integrate them into Umayyad monuments where gold on blue was already omnipresent, but other evidence suggests that this was not the case. Herzfeld's excavations of the mosque of al-Mutawakkil in Samarra (*reg.* 232–47/847–61) have yielded extensive remains of mosaic in gold and other colours.¹³⁰ This ornament appears to have been concentrated around the *miḥrāb*, as in Umayyad mosques. Al-Muqaddasī (*fl.* fourth/tenth century) was probably referring to it when he asserted that this mosque rivalled that of Damascus and had its walls covered with '*mīnā*'.¹³¹ No extensive details of the colour range used in these mosaics have been published, and the fragments discovered bear no clues as to whether they ever formed part of an inscription. They do confirm, however, that mosaic decoration following Umayyad precedents was integral to some of the most monumental °Abbāsid religious structures – the mosque of al-Mutawakkil being the earliest °Abbāsid imperial mosque of which any substantial remains survive.

The inscriptions of the Nilometer on Rawḍa island (Fuṣṭāt), which was rebuilt in 247/861 at the order of the same al-Mutawakkil, are better documented: much of the °Abbāsid structure remains *in situ*, and Ibn Khallikān has preserved an account of its construction. This account begins abruptly, without a source being cited, and is narrated by a certain Aḥmad al-Ḥāsib who has not been securely identified by modern scholarship.¹³² Nevertheless, the accuracy of the inscriptions as cited in this text has been largely confirmed by their extant sections; the account also correctly refers to several political figures active in this period, while distilling a subtle awareness of the tensions that existed between the caliph and his son al-Muntaṣir at the time. This all contributes to lend this source a certain historical credibility.¹³³ With regard to the inscription itself, the following extracts are of particular significance:¹³⁴

I chose the verses of the Qur'an the best and most appropriate to the Nilometer. I carved what I had written on marble in the position fixed beforehand, with straight letters as thick as the finger, stiff, the background coloured with waxed lapis lazuli (*al-lāzaward al-mushamma*) so that they could be read from a distance ... The



Fig. 14: Detail of a mosaic inscription from the Great Mosque of Cordoba (expansion of al-Ḥakam II, 350–66/ 961–76)

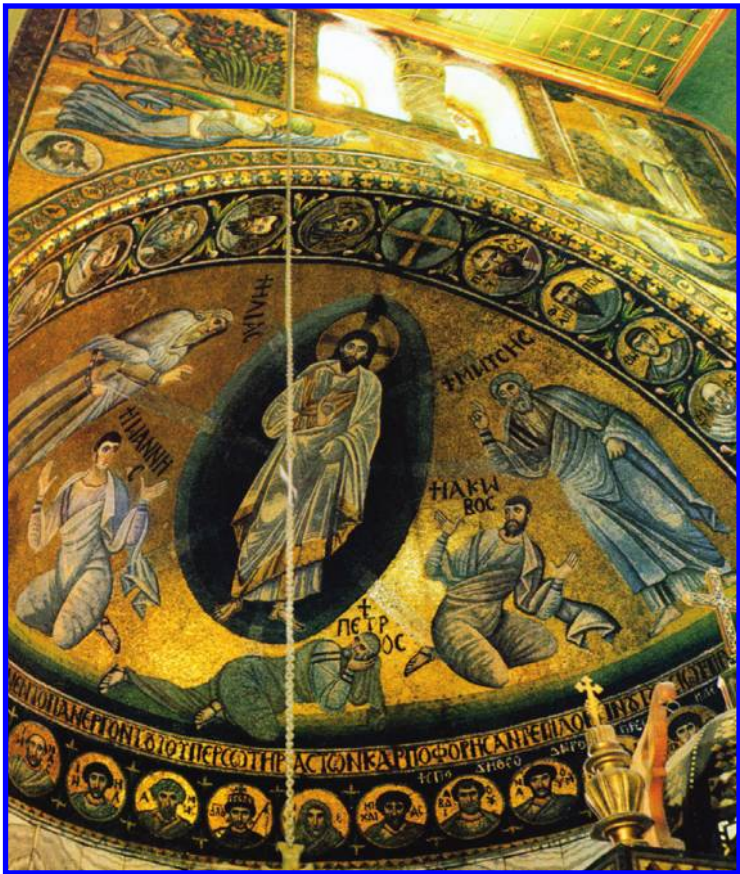


Fig. 15: Apse mosaic of the Monastery of St Catherine (Mount Sinai, sixth century AD)

upper walls I entirely engraved, carved and painted in waxed lapis lazuli and I continued upwards above the 19 cubits of the column, to the capital and the beam which keeps it in position. I have engraved all of this in gold and lapis lazuli (*bi'l-dhahab wa'l-lāzaward*).

Modern observation of the surviving parts has indeed revealed small fragments of a dark blue ground; and while the calligraphy is now in the natural colour of the marble, it is plausible that the gold mentioned here did originally exist, before it flaked off or was scraped away over the years.¹³⁵ Interestingly, the account mentions the visibility afforded by this strong colour contrast, a remark which equally holds for other gold texts on blue, and indeed white on blue.¹³⁶ The Nilometer inscription was originally written in the name of al-Mutawakkil and primarily consisted of Qur'anic ayas calling for the coming of rain, such as *It is He who sends down the rain after they have despaired and He unfolds His mercy; He is the Protector, the All-laudable* (Q. 42:28).¹³⁷ This reminds us of the votive aspect of a text which uttered the community's plea for abundant yearly floods of the Nile. Intertwined with this sacred dimension was one of rulership, in a context where caliphs vied for a contested moral leadership of the community. Indeed, all the Umayyad and 'Abbāsīd gold inscriptions on blue mentioned so far were explicitly written in the name of the ruling caliph. This could simply be a reflection of the material means which only such immensely wealthy patrons could muster; but one cannot rule out that the colour scheme gradually came to acquire a royal connotation. Such a possibility was explicitly stated at a later date by Ṣalāḥ al-Dīn ibn Burhān (*fl.* seventh/thirteenth century), who asserted that in the Yemen 'marble and paint in lapis (*lāzaward*) and gold are among the prerogatives of the sultan, enjoyed by no one but him in the community'.¹³⁸ Its relevance to the successor states of the 'Abbāsīds, notably the Buwayhids and Fāṭimids, who used gold on blue for their most lavish royal *ṭirāz*, would deserve to be more fully investigated by future research.

As 'Abbāsīd patronage was attaining unrivalled wealth and grandeur in the third/ninth century, the enduring tension between the authorities and religious circles reached climax.¹³⁹ Their conflict was primarily about moral leadership of the Muslim community, but one of its ramifications was the acceptability of luxury and ornament. The use of gold and silver in particular was widely rejected in religious writings of this period for jewellery, clothing, and all the more so for Qur'anic manuscripts.¹⁴⁰ In his *Kitāb al-maṣāḥif*, Ibn Abī Dāwūd, for example, recorded this aphorism: 'If you decorate your mosques and embellish your Qur'ans, you will be obliterated'.¹⁴¹ This may have been almost an adage in his day, for he ascribes it to three different originators and as many distinct chains of transmission. Another tradition cited in the same source states that 'Abd Allāh' saw a Qur'an decorated in gold and reacted by saying 'its most beautiful ornament is its correct recitation'.¹⁴² In a third tradition, Ibn 'Abbās (d. 68/688) is said to have seen a

Qur'an decorated with silver and declared 'you will tempt thieves with it; its beauty lies within'.¹⁴³ Given the difficulties posed by oral transmission, these anecdotes cannot be regarded as reliable historical evidence about the period which they are meant to document, the first century of Islam; but they are a sure record of prevalent attitudes at the time of their composition, the third/ninth to fourth/tenth centuries.

The Qur'an itself does not proscribe the use of gold and silver but rather warns against their accumulation: *those who treasure up gold and silver and do not expend them in the way of God – give them the good tidings of a painful chastisement* (Q. 9:34).¹⁴⁴ In Paradise, on the other hand, believers will be surrounded by gold, silver, silk and other precious materials *God shall surely admit those who believe and do righteous deeds into gardens underneath which rivers flow; therein they shall be adorned with bracelets of gold and with pearls, and their apparel there shall be of silk* (Q. 22:23).¹⁴⁵ Gold, in this perspective, is not cursed: its precious character is acknowledged and the fundamental predicament resides with the amassing of earthly riches. While the commission of luxury Qur'ans with precious materials was condemned by most religious scholars for the ostentation and potential temptation it represented, it could, theoretically at least, be defended as an act of piety, especially as these manuscripts were typically endowed in perpetuity to mosques. A minority of religious scholars may, in this respect, have adopted a stance closer to that of the ruling élite. Abū Ḥanīfa (d. 150/767) in particular is said to have viewed the embellishment of mosques favourably, as notably suggested by the writings of his follower al-Samarqandī in the fourth/tenth century.¹⁴⁶ Ibn Abī Dāwūd also records this single tradition about 'Abd Allāh' on the authority of Ibn 'Awn (d. ca 151/768).¹⁴⁷

He would be asked about the embellishment of Qur'ans and used to say: 'I do not see a problem with it.' And he liked for the Qur'an to be decorated, and for its [binding] strap (*'ilāqa*), workmanship (*ṣun'a*) and everything about it to be well crafted.

Whether or not the Blue Qur'an was indeed viewed more favourably by some religious scholars than by others, the manuscript, by virtue not only of its wealth but also of its form, fundamentally appears to reflect 'Abbāsīd patronage of the highest rank, probably caliphal. Given its relatively early date, the imperial capital at Baghdad comes to mind as a plausible production centre, whether it was subsequently kept there or sent to a major mosque of the empire, like Medina; though in the absence of positive evidence, this hypothesis can only remain tentative. Having approached this broad phenomenon through the lens of its negative perception by religious scholars, it is now time to explore in more detail the meaning that its makers may have ascribed to it.

From Colour to Light

In a modern perspective, colour is instinctively associated with tonality; yet in scientific terms, it is defined not only by hue, but also by saturation and brightness.¹⁴⁸ It is upon the latter two qualities that the emphasis was placed in Islamic civilisation, as it had been in Byzantium.¹⁴⁹ In the Qur'an, Paradise is described as containing two gardens below which are two others *both of deepest green* (Q. 55:64): the word commonly rendered as 'green' is *mudhāmmatān* (from the root *d-h-m*), which has the general meaning of dark, rather than a specific hue.¹⁵⁰ The calf of gold that was venerated by the Hebrews while Moses was receiving the tablets of the law is also referred to as a *yellow cow of intense (or radiating) colour* (*baqaratun ṣafrā'u fāqī'un lawnuhā*, Q. 2:69). In other Arabic texts, the sun was sometimes called 'the white' (*al-bayḍā'*),¹⁵¹ and the sky described as green (*khaḍrā'*); the latter word could also be used to denote blackness and darkness.¹⁵² In the *Book of Treasures*, a Syriac encyclopedia composed in Baghdad at the height of its scientific activity, in the early third/ninth century, Job of Edessa described the colour spectrum as being based on:¹⁵³

... whiteness and blackness, which are the universal, true and first genera, of which the remaining ones, called 'genera' in a relative sense only, are composed, namely redness, saffron-yellowness, greenness and gold-yellowness; these are sub-divided into species and the species into individual colours.

A similar decomposition of the spectrum was given in *Firdaws al-ḥikma*, a book completed in 235/850, probably at Samarra, by °Alī ibn Rabban al-Ṭabarī, who is said to have been a boon companion (*nadīm*) of al-Mutawakkil.¹⁵⁴ About blue, al-Ṭabarī also wrote:¹⁵⁵

Lapis lazuli (*al-lāzaward*) and dark blue (*al-kuḥlī*) come in between white and green. The purer dark blue becomes, the more it tends towards blue (*al-zurqa*) then what is beyond blue until it returns to white. The more dark blue gains in saturation, the more it returns towards black.

The natural implication of this mode of colour perception is that, at a fundamental level, the Blue Qur'an, with its gold script and intense dark blue ground, had a resonance of light over darkness. The opposition between *nūr* and *ẓulumāt* is profoundly rooted in the Qur'an itself.¹⁵⁶ It is sometimes employed in a literal sense, related to the physical world:

Or they [the unbelievers] are as shadows upon a sea obscure, covered by a billow above which is a billow above which are clouds, shadows piled upon one another; when he puts forth his hand, wellnigh he

cannot see it. And to whomsoever God assigns no light, no light has he (Q. 24:40).

But more often, the antithesis is essentially spiritual, and specifically related to the unfolding of divine revelation. The Torah and Gospels are described as 'guidance' (*hudā*) and 'light' (*nūr*) from God (Q. 5:44; Q. 5:46; Q. 6:91). The Qur'an represents a descent of divine light on earth, as repeatedly asserted in the text itself, for instance:¹⁵⁷

We have revealed to thee a spirit of Our bidding. Thou knewest not what the Book is, nor belief; but We made it a light, whereby We guide whom We will of Our servants (Q. 42:52).

Reflections of this imagery soon found their way into material expressions of the faith. In the mosaics at the Dome of the Rock, the gold tesserae, including those of the inscription on the inner side of the central octagon, were placed at a slightly inclined angle to the wall so that they would seem to glitter at ground level. Sibṭ ibn al-Jawzī (d. 654/1256) has left us a vivid account of aspects of ritual life in this building, which he cites on the authority of Muḥammad ibn al-Sāʿib (d. 146/763):¹⁵⁸

Every Monday and Thursday the gatekeepers used to melt musk, ambergris, rose water and saffron and to prepare with it [a kind of perfume called] *ghāliya* ... Every morning on the above-mentioned days, the attendants ... rub the *ṣakhra* over with the perfume. Then the incense is put in censers of gold and silver inside of which there is an Indian odoriferous wood ... The gate-keepers lower the curtains so that the incense encircles the *ṣakhra* entirely and the scent clings to it. Then the curtains are raised so that this scent drifts out until it fills the entire city ... Of everyone on whom the scent was found, it was said that this person had been today in the *ṣakhra*.

This vibrant experience of sense perception was stimulated not only through smell, but also through sight. Ibn al-Jawzī continues:¹⁵⁹

They used to illuminate the Dome of the Rock with oil of ben ... [The Ḥaram] has five thousands lamps and four hundred chains ... Each night, one hundred candles [were] lit in the *ṣakhra*, the same number are lit in the Aqṣā.

At the Dome of the Rock, as at the Great Mosque of Damascus, marble windows with geometrical grilles subtly filtered the light during day time. Come darkness, the flickering light of candles and chandeliers came to the fore, lending textures, faces and colours an entirely different consistency. The deployment of lighting in these religious buildings clearly went beyond simply functional needs. At Damascus, al-Walīd's court poet al-Nābigha al-Shaybānī (d. ca 126/744) eulogised the 'gold hanging lamps

[of the cupola], filled with oil whose light illuminates the Lebanon and the coast'; the mosaics of this mosque, he also wrote, had been 'so perfected that they would nearly blind the clear-sighted'.¹⁶⁰ Quite literally, these ornaments were perceived as sources of light, in an iconography of light which appears to have received particular emphasis at the Umayyad mosque of Medina. When Ibn 'Abd Rabbih visited it in the early fourth/tenth century, the axis leading to the *mihrāb* was gilded, probably at ceiling level; so was the cupola on the same axis, in a scheme that appears to have originated in Umayyad times.¹⁶¹ On the *qibla* wall itself, the last suras of the Qur'an, with their numerous references to the darkness of night and the brightness of day, had been laid in gold tesserae over a blue ground in the days of al-Walīd.¹⁶² It is in this very area that the luxury Qur'ans commissioned by al-Ḥajjāj and al-Mahdī were placed.

These manuscripts appear to have played a part in a living experience of ritual which involved not only sight, but also smell, hearing of Qur'anic recitation and touch during ritual prostration. The mention of their being regularly laid open in the sanctuary and the commissioning of dedicated pulpits by al-Mahdī concur to suggest that manuscripts like the Blue Qur'an were meant not only to be *read* but also *seen*, exposed to the gaze of worshippers for a few hours of the week, in the candlelit darkness of Thursday *du'ā'* and the natural light of Friday *jumu'a*. The effect is all the more resplendent in a dim room under a relatively intense source of light, the kind of atmosphere created by candlelight.¹⁶³

The dimension of light was almost certainly a natural corollary of the Blue Qur'an. It might partly explain why rulers – and particularly ruling caliphs, as 'Successors' of the Prophet and 'Commanders of the Faithful' – were keen to associate their name and exercise of power with this colour scheme. Parallels to this mode of sense perception are, again, to be found in early Christianity. The glimmering gold of church mosaics was compared by more than one Byzantine writer to divine light and the rays of the sun.¹⁶⁴ These mosaics frequently comprised gold inscriptions on blue, to which we have already alluded; but figural themes were the real focus of attention in their original buildings; and these, as it happens, were themselves often based on the same colour scheme. At the monastery of St Catherine in Sinai, for example, the sixth-century AD Transfiguration scene in the apse, the culminating point of the basilica, shows Christ clad in gold and white against a dark blue mandorla; rays of white light shine out of his body and reach the prophets and apostles (fig. 15). These colours are entirely fitting, for we read in the Gospels that when Jesus was transfigured, 'his face did shine as the sun, and his raiment was white as the light' (Matthew 17:2).¹⁶⁵ Just above his image, at the apex of the soffit, also lies a golden cross on a dark blue ground. The same colour scheme was consistently applied to these and other themes, such as the Ascension or the *Theotokos* and Child, in early mosaics, Bible manuscripts and icons.¹⁶⁶ What Christian iconography had depicted through a representation of divine Incarnation was thus transferred, in Islam, to the divine Word embodied by the

Qur'an. Calligraphy had become the principal channel for making the sacred manifest to man, in a visual expression of remarkable force and sobriety.

Conclusion

The Blue Qur'an is, in all likelihood, an early ʿAbbāsīd manuscript made for a patron of the highest rank, whether in the imperial capital Baghdad or another prominent centre. Its colour scheme originates in an Umayyad tradition of gold inscriptions on blue which partly drew its inspiration from Byzantine precedents, but also reflected the distinctive status of calligraphy in Islam. Beside the practical advantage of clarity, gold on blue may have had a connotation of royalty and, at a more fundamental level, of divine light shining through darkness; these different dimensions, far from being mutually exclusive, may have worked potently in concert in their original context. It is a testimony to the profound appeal of this manuscript that, after more than a millennium in existence, the Blue Qur'an should remain an almost universal source of wonder.

APPENDICES

Appendix One: Gold on Blue in T'ang China

In 840 AD, Ennin, a Japanese Buddhist monk, went on a pilgrimage to the sacred mountain of Wutai, in the northeast of China. His account of the visit includes this description of a treasure he saw:¹⁶⁷

There is a *tripitaka* in more than six thousand scrolls, all in gold and silver characters on dark blue paper with rollers of white sandalwood, jade and ivory. I saw the subtitle by the man who had vowed [to have this work done]. It said: 'I, Cheng Tao-chüeh, a man of Ch'ang-an, on the fourteenth day of the fifth moon of the fourteenth year of Ta-li [779 AD], while going around the five terraces, personally saw His Holiness [the bodhisattva Monju] and the myriad Bodhisattvas and the gold-coloured world [of Monju] and accordingly developed faith and copied six thousand scrolls of the *tripitaka* in gold and silver character.'

The tradition of writing Buddhist canonical scriptures in gold on blue was thus in existence by the year 779 AD in China, and its traces may reach not further back than the eighth century AD. The same period witnessed unprecedented levels of trade and diplomatic contacts between the T'ang court at Ch'ang-an and the ʿAbbāsids in Baghdad and Samarra. Their physical channels were extensive land routes and most of all, sea routes that dotted the coast of the Indian Ocean. One consequence of this exchange pattern was the decisive transformation of the Islamic ceramics industry under the impetus of imported T'ang wares; but it also had broader ramifications, woven around a rich web of human networks. The Muslim colony in Canton, for example, had grown so large in the early years of the ʿAbbāsids that the city was burnt and looted by their revolt in 758 AD; at about the same time, a direct Chinese eyewitness recorded the names of Chinese artisans – silk weavers, goldsmiths, painters – who had settled in the ʿAbbāsīd capital.¹⁶⁸ This intense pattern of exchange went on growing in the third/ninth century. It begs the question, may the development of gold on blue in China and the Islamic world have been in any way related? This fascinating issue remains to be explored by future scholarship.

Appendix Two: A List of Published Folios from the Blue Qur'an

The verse numbers given here provide a broad sequence of the folios in their original order; in some instances, these numbers can be approximative, as this information is not consistently provided in all publications (where altogether absent, it has been derived from published images, which are typically limited to one side of any given folio). Auction references are to London sales rooms, unless otherwise stated. This list is inevitably non-exhaustive;¹⁶⁹ the Raqqāda collection alone comprises 67 folios of which only a handful have been published, so that the full extent of their Qur'anic text is unknown; further leaves are also likely to exist in private hands.

Sura	Ayas	Collection	Fols	Size (HxW cm)	Publication
2	26–30	Private collection	1	25.4 x 34.9	Christie's, 25 November 1985, lot 83
2	34–41	Doha, Museum of Islamic Art, Ms.8.2006	1	28 x 38	Jodidio 2008: no. 5
2	60–3, 69–74, 93–6	Dublin, Chester Beatty Library, Ms. 1405	3	27.5 x 36.7	James 1980: no. 9
2	74–81	Private collection	1	28.5 x 38.1	Sotheby's, 24 October 2007, lot 7
2	120–7	London, Nasser D. Khalili Collection, KFQ53, fol. 1	1	28.3 x 37.7	Déroche 1992: no. 42
2	148–150	Collection of Prince Sadruddin Agha Khan	1	28.6 x 35	Welch 1982: no. 1
2	178–81	Private collection	1	28.8 x 38.5	Sotheby's, 15 October 1997, lot 6
2	183–7	Private collection	1	28.4 x 38.3	Sotheby's, 23 April 1997, lot 41
2	190–4	Private collection	1	25.7 x 37.5	Falk 1985: no. 3
2	196–202	Riyād, Rifaat Sheikh al-Ard collection	2	29 x 40	Geneva 1988: cat. 4 (and fig. 7 above)
2	218–21	Private collection	1	28.6 x 37.4	Christie's, 10 October 1989, lot 303
2	229–31	Cambridge (MA), Fogg Art Museum, 1967.23	1	28.6 x 37.5	Welch 1979: no. 4
2	237–41	Private collection	1	31.8 x 47*	Roxburgh 2007: fig. 8
2	261–7	Private collection	1	25 x 37	Fraser and Kwiatkowski 2006: no. 10
3	7–9	Private collection	1	28.7 x 36.8	Sotheby's, 29 April 1998, lot 4
3	28–31	Private collection	1	28.8 x 36.9	Christie's, 19 October 1993, lot 35
3	31–6	Private collection	1	25.6 x 34.4	Sotheby's, 15 October 1998, lot 8
3	55–64	London, Nasser D. Khalili Collection, KFQ53, fol. 2	1	28.3 x 37.7	Déroche 1992: no. 42
3	79–81	Private collection	1	28.5 x 38.1	Christie's, 16 June 1986, lot 56
3	91–6	Private collection	1	28.8 x 38	Sotheby's, 15 October 1984, lot 220
3	127–33	Private collection	1	28.5 x 38	Sotheby's, 22 May 1986, lot 243

Sura	Ayas	Collection	Fols	Size (HxW cm)	Publication
3	170–4	Private collection	1	28.5 x 38.2	Sotheby's, 22 October 1993, lot 32
3	185–8	Private collection	1	28.5 x 37.7	Sotheby's (Geneva), 25 June 1985, Lot 11
3	188–92	Private collection	1	28.7 x 38.2	Sotheby's, 12 October 2000, lot 5
4	8–12	Paris, Institut du Monde Arabe, AC 84–09	1	28.2 x 38	Guesdon and Vernay–Nouri 2001: no. 18
4	19–23	Private collection	1	–	Sotheby's, 15 October 1998, lot 7
4	23–5	Los Angeles County Museum of Art, M.86.196	1	28.3 x 37.5	Stevens and Butler eds 2003: 44
4	59–62	Private collection	1	27.2 x 36.8	Stanley 1996: item 14
13	3–10, 23–31	Private collection	2	28.9 x 38.3	Stanley 1996: item 12
18	1–14	Private collection	1	29.9 x 33.3	Stanley 1996: item 13
18	82–90	Kuwait, Tareq Rajab Museum	1	29 x 40	Safwat 1997: 30
29	51–6	Bahrein, Beit al-Qur'an	1	–	Nawwab 2000
30	28–32	New York, Metropolitan Museum of Art, 2004.88	1	30.5 x 40.3	Metropolitan Museum of Art website
31 32	33–4	Raqqada, Musée des Arts Islamiques, Rutbi 196 ^{**}	67	31 x 41	Rammah, MWNF website
33	31–4	Raqqada, Musée des Arts Islamiques, Rutbi 196	67	–	Munajjid 1960: Plate 5
35	1–3	Raqqada, Musée des Arts Islamiques, Rutbi 196	67	–	Fig. 1 above
42	13–16	Private collection	1	30.6 x 40	Sotheby's, 13 April 1976, Lot 237
42	10–23	Private collection	1	–	Tabbaa 2001: fig. 17
–	–	Tunis, Musée du Bardo	4	–	Unpublished

* The width given in this publication may be erroneous, as it far exceeds that of other leaves.

** When the London Festival of Islam was held in 1976, this fragment was held at the National Institute of Archaeology and Art in Tunis.

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- N.I. Nawwab, 'Beit al-Qur'an: Religion, Art, Scholarship', *Aramco World*, May/June 2000, pp. 24–31
- M. Rammah, 'Two pages from the Blue Qur'an', *Museum With No Frontiers*, available at: http://www.discoverislimicart.org/database_item.php?id=object;ISL;tn;Mus01;2;en (Accessed September 19, 2009)
- D. Roxburgh, *Writing the Word of God: Calligraphy and the Qur'an* (Houston: The Museum of Fine Arts, 2007)
- N. Safwat, G. Fehérvári and M. Zakariya, *The Harmony of Letters: Islamic Calligraphy from the Tareq Rajab Museum (Kuwait)*, (Singapore: National Heritage Board, 1997)
- T. Stanley, 'The Qur'an on Blue Vellum: Africa or Spain?' in *The Qur'an and Calligraphy: A Selection of Fine Manuscript Material* (London: Bernard Quaritch, 1996), pp. 7–15.
- M. Stevens and N. Butler (eds), *Los Angeles County Museum of Art* (London: Thames & Hudson, 2003)
- Y. Tabbaa, *The Transformation of Islamic Art During the Sunni Revival* (Seattle: University of Washington Press, 2001)
- A. Welch, *Calligraphy in the Arts of the Muslim World* (Austin: University of Texas Press, 1979)
- A. Welch and S.C. Welch, *Arts of the Islamic Book: The Collection of Prince Sadruddin Aga Khan* (Ithaca: Cornell University Press, 1982)

NOTES

1 I wish to thank François Déroche and John Lowden for their invaluable help in collecting material for this article; Elaine Wright for giving me access to the collection of the Chester Beatty Library and Robert Hillenbrand for thoroughly scrutinising an earlier version of the text. I also owe a debt of gratitude to James Allan, Glaire Anderson, Salam Kaoukji, Alya Karamé, Michael Macdonald, Andrew Marsham, Karam Nachar, Heather Pulliam, Mourad Rammah, Mariam Rosser-Owen and my wife Hiba for their help and assistance at various stages of this work. The finished article and its contents naturally remain my entire responsibility.

2 This estimate was obtained by dividing the number of words in the Qur'an (around 77,500, with some variation between different counts) by the number of words per page in the Blue Qur'an (65–70 words on average) multiplied by two. A comparable figure was reached by Jonathan Bloom in 'al-Ma'mun's Blue Koran?', *Revue des Etudes Islamiques* 54 (1986), p. 61.

3 Personal communication from Mourad Rammah, keeper of manuscripts at the Raqqāda museum. Mr. Rammah also informed me that four more folios are kept at the Musée du Bardo in Tunis.

4 Muʿizz ibn Bādīs, *Mediaeval Arabic Bookmaking and Its Relation to Early Chemistry and Pharmacology*, tr. Martin Levey, Transactions of the American Philosophical Society (Philadelphia: American Philosophical Society, 1962), p. 32.

5 See for example the Qur'an in style C.Ib published in François Déroche, *The Abbasid Tradition: Qurʾāns of the 8th to 10th centuries A.D.*, The Nasser D. Khalili Collection of Islamic Art (London: The Nour Foundation, 1992), no. 11. Déroche mentions the presence of

several dyed fragments in Istanbul, most of them in saffron and related colours, but some also in pink and violet. The Beit al-Qur'an in Bahrain has leaves dyed lemon and chocolate (personal communication from R. Hillenbrand).

6 The widespread assumption of an indigo dye appears to have been confirmed by recent tests carried out by Professor Nacer Ayed (INSAT, Tunis); but despite repeated attempts, it has not been possible to obtain any information about these tests by the time of bringing this research to a close, in October 2009. Brief references to the results are made in Mourad Rammah, 'Feuillet du coran bleu', *Qantara*, http://www.qantara-med.org/qantara4/public/show_document.php?do_id=651 (Accessed 23 July 2009); Mourad Rammah, 'Two Pages from the Blue Qur'an', *Museum With No Frontiers*, http://www.discoverislamicart.org/database_item.php?id=object;ISL;tn;Mus01;2;en (Accessed 19 September 2009).

7 On the Arabic terminology, see Jenny Balfour-Paul, *Indigo in the Arab World* (Richmond: Curzon, 1997), pp. 196–7, n. 10.

8 Nicholas Eastaugh, Tracey Chaplin and Ruth Siddall, *The Pigment Compendium: A Dictionary of Historical Pigments* (London: Elsevier Butterworth-Heinemann, 2004), pp. 194–5. One of several other indigotin-producing species that may have been acclimatised in the Islamic world is *polygonum tinctorium* ('Japanese' or 'Chinese' indigo, 'dyer's knotweed'), which is of East Asian origin (Balfour-Paul, *Indigo in the Arab World*, p. 42).

9 Werner Schmucker, *Die pflanzliche und mineralische Materia Medica im Firdaus al-Hikma des Tabari*, Bonner Orientalistische Studien Neue Serie, Bd. 18 (Bonn: Orientalisches Seminar der Universität Bonn, 1969), p. 534.

10 S.D. Goitein, *A Mediterranean Society: The Jewish Communities of the Arab World as Portrayed in the Documents of the Cairo Geniza* (6 vols, Berkeley: University of California Press, 1967), vol. 4 ('Daily Life'), p. 172.

11 Balfour-Paul, *Indigo in the Arab World*, pp. 19–20.

12 Robin J.H. Clark et al., 'Indigo, Woad and Tyrian Purple: Important Vat Dyes from Antiquity to the Present', *Endeavour* 17:4 (1993), pp. 191–9, p. 193; Balfour-Paul, *Indigo in the Arab World*, pp. 84–5.

13 I thank Ms Rose for sharing her observations about the parchment of the manuscript with me. Incidentally, the crystalline nature of the colour reinforces the likelihood that the material used was indeed indigo, as two other major blue pigments which could have been posited as alternatives, ultramarine and lazurite, are insoluble, inorganic minerals which cannot be used as dyes.

14 Personal communications from François Déroche and Kristine Rose; see also Sheila Blair, 'Color and Gold: The Decorated Papers Used in Manuscripts in Later Islamic Times', *Muqarnas* 17 (2000), p. 24.

15 Inge Boesken Kanold, 'The Purple Fermentation Vat: Dyeing or Painting Parchment with Murex Trunculus', *Dyes in History and Archaeology* 20 (2005), pp. 150–4.

16 In a sample of 34 published folios which I have analysed along these lines, this ratio oscillated between 1.36 and 1.43, with a mean of 1.39. The standard deviation, which reflects the overall degree of variation from the mean, was remarkably small (0.017). The manuscript thus appears to have been written with a text box ratio of about 1.40. This figure, however, is based on the uppermost limit of the top text box being placed one line height above the top baseline of text, as suggested by the observation of a broad sample of early Qur'anic manuscripts. In the specific case of the Blue Qur'an, the drawn rulings only reach up to the top baseline of text, which might reflect a discrepancy between theory and praxis: even though its presence is part and parcel of the corresponding aesthetic of the layout, the additional ruling above the top baseline of text is not technically necessary to draw a regular text box and may

have been bypassed in some cases. On this system, see Alain George, *The Rise of Islamic Calligraphy* (London: Saqi, 2010), pp. 56–7, p. 101; Alain George, 'The Geometry of Early Qur'anic Manuscripts', *Journal of Qur'anic Studies* 9:1 (2007), pp. 78–110.

17 The fact that the outline was added after the letters had been written in gold is revealed by close observation of the manuscript, where the brown line occasionally runs across the gold.

18 For an image, see Tim Stanley, 'The Qur'an on Blue Vellum: Africa or Spain?' in *The Qur'an and Calligraphy: A Selection of Fine Manuscript Material* (London: Bernard Quaritch, 1996), pp. 7–15 and illustrations, p. 65; Robert Hillenbrand, *Islamic Art and Architecture* (London: Thames & Hudson, 1999), p. 67.

19 As noted by Stanley, 'The Qur'an on Blue Vellum', p. 10; see Abū 'Abd Allāh ibn Abī Dāwūd al-Sijstānī, *Materials for the History of the Text of the Qur'ān: The Old Codices – The Kitāb al-Maṣāḥif of Ibn Abī Dāwūd*, Arthur Jeffery (ed.), Trustees of the 'De Goeje Fund' (Leiden: Brill, 1937), p. 122.

20 See also Stanley, 'The Qur'an on Blue Vellum', pp. 10–11.

21 Frederik Robert Martin, *Miniature Painting and Painters of Persia, India and Turkey from the 8th to 18th Centuries* (2 vols, Paris: Vever, 1912), vol. 1, p. 106, p. 141; see also Bloom, 'al-Ma'mun's Blue Koran?', p. 62.

22 Bloom, 'al-Ma'mun's Blue Koran?'; Johnathan Bloom, 'The Blue Koran: An Early Fatimid Manuscript from the Maghrib' in François Déroche (ed.), *Les Manuscrits du Moyen-Orient* (Istanbul and Paris: Institut Français d'Etudes Anatoliennes, 1989), pp. 95–9; Johnathan Bloom, 'The Early Fatimid Blue Koran Manuscript', *Graeco-Arabica* 4 (1991), pp. 171–8.

23 Stanley, 'The Qur'an on Blue Vellum'.

24 In Marcus Fraser and Will Kwiatkowski, *Ink and Gold: Islamic Calligraphy* (London: Sam Fogg, 2006), pp. 44–8.

25 Ibrāhīm Shabbūḥ, 'Sijil qadīm li-maktabat jāmi' al-Qayrawān', *Majallat ma'had al-makhṭūṭāt al-'Arabiyya* 2:2 (1956), pp. 339–72, p. 345. Translation after Tim Stanley ('The Qur'an on Blue Vellum', p. 9), with minor modifications. According to Shabbūḥ's collation, the inventory states that the manuscript had five lines to the page, as opposed to fifteen for the Blue Qur'an. Stanley has convincingly argued that, because the manuscript of the inventory itself was damaged, Shabbūḥ may have conflated two entries from the original text, which appear to be separated by a section mark; the second of these entries is cited above.

26 See his detailed discussion of this issue in 'The Qur'an on Blue Vellum', pp. 9–12.

27 Stanley, 'The Qur'an on Blue Vellum', p. 11.

28 As already noted by Bloom, 'The Blue Koran', p. 97; see also François Déroche, *Le livre manuscrit arabe. Préludes à une histoire* (Paris: Bibliothèque Nationale de France, 2004), p. 68.

29 Bloom, 'The Blue Koran', p. 98.

30 George, *The Rise of Islamic Calligraphy*, p. 141; Stanley, 'The Qur'an on Blue Vellum', p. 13. In his account of the plunder of the Fāṭimid treasury by Turkish mercenaries between 460/1068 and 461/1069, Rashīd ibn al-Zubayr (fl. fourth/eleventh century) mentions volumes of the Qur'an written by Ibn Muqla and Ibn al-Bawwāb that were 'maktūba bi'l-dhahab al-mukhaḥḥal bi'l-lāzaward'. While Bloom apparently took this phrase to mean 'written in gold darkened with ultramarine', Stanley has rightly pointed out the more likely reading 'written in gold outlined in ultramarine', as suggested by the etymology of the word mukhaḥḥal. The grammar of the sentence, which links the latter word to dhahab, not khatamāt, confirms this conclusion: it describes an action done to the gold of the calligraphy rather than the paper or parchment. This reading was also adopted by Ghāda Qaddūmī in her recent translation of this work, cf. Rashīd ibn al-Zubayr, *Book of Gifts and Rarities: Kitāb al-Hadāya wa*

al-Tuḥaf. Selections Compiled in the Fifteenth Century from an Eleventh-Century Manuscript on Gifts and Treasures, tr. Ghāda Ḥijjāwī Qaddūmī, Harvard Middle Eastern Monographs 29 (Cambridge MA: Harvard University Press, 1996), p. 234. Extant Kufic manuscripts written in gold have their letters outlined in dark brown ink, and it is possible that this was sometimes done in blue, as put forward by Stanley. A Fāṭimid turban in the name of al-ʿAzīz (*reg.* 365–86/975–96) has its gold inscription outlined in this manner; see Marianne Barrucand et al., *Trésors fatimides du Caire: Exposition présentée à l'Institut du Monde Arabe du 28 avril au 30 août 1998* (Paris/Gand: Institut du Monde Arabe/Snoeck-Ducaju & Zoon, 1998), no. 33.

31 On this classification, see François Déroche, *Les manuscrits du Coran. Aux origines de la calligraphie coranique*. Catalogue des manuscrits arabes, Deuxième partie: manuscrits musulmans, Tome I, 1 (Paris: Bibliothèque Nationale de France, 1983); Déroche, *The Abbasid Tradition*; George, *The Rise of Islamic Calligraphy*, Appendix.

32 Besides the Blue Qur'an, see for example fig. 13 below, as well as Déroche, *The Abbasid Tradition*, no. 38; Jean-Paul Roux et al., *L'Islam dans les collections nationales* (Paris: Réunion des musées nationaux, 1977), pl. 218; Claus-Peter Haase, Jens Kröger and Ursula Lienert (eds), *Oriental Splendour: Islamic Art from German Private Collections* (Hamburg: Museum für Kunst und Gewerbe), fig. 4; Sotheby's (London), 1 December 1969, lot 181.

33 On the interline system, cf. George, 'The Geometry of Early Qur'anic Manuscripts', pp. 97–103.

34 For C.II and C.III, see Déroche, *The Abbasid Tradition*, no. 14, no. 16, no. 17; Mikhail Piotrovsky (ed.), *Earthly Beauty, Heavenly Art: Art of Islam* (Amsterdam: Lund Humphries Publishers, 2001), no. 44.

35 See also Martin Lings and Yasin Hamid Safadi, *The Qur'ān: Catalogue of an Exhibition of Qur'ān Manuscripts at the British Library, 3 April – 15 August 1976* (London: World of Islam Publishing Co. for the British Library, 1976), p. 25, no. 11; the same page appears in colour in Rammah, 'Two Pages from the Blue Qur'an'.

36 For examples in the B styles, C.II and C.III, see Déroche, *The Abbasid Tradition*, no. 4, no. 7, no. 8, no. 15, no. 17; for C.Ia, Piotrovsky, *Earthly Beauty, Heavenly Art*, nos 39–41; for F.I, Sotheby's (London), 20 November 1986, lot 255; Fraser and Kwiatkowski, *Ink and Gold*, p. 28. Such decorative sura markers are prevalent in all of the above styles except B.II, where some specimens have no sura marker or a sura title written in large D.I (cf. George, *The Rise of Islamic Calligraphy*, pp. 91–2). The latter category of manuscripts could be later than those with decorative bands; alternatively, the titles in D.I may have been added to earlier B.II manuscripts in the third/ninth century.

37 This list is inevitably incomplete. More dated Qur'ans probably remain to be discovered; several also are known to exist but have only been partially documented. One manuscript in C.Ia was published with its *waqfiyya* by Bernhard Moritz in *Arabic Palaeography: A Collection of Arabic Texts from the First Century of the Hidjra till the Year 1000*, Publications of the Khedival Library, 16 (Cairo: Wein, 1905), plates 17–18; but the reading of the century in its date is uncertain. Déroche also mentions (*The Abbasid Tradition*, p. 37, p. 42) one manuscript in D.I with a birth record of 232/847, a second in D.IV with a *waqfiyya* of 270/884 and a third in E.I with a birth record of 309/922; since these have not been fully published, they are not included in the present list. Further Qur'ans with *waqfiyyāt* from Istanbul are listed without a mention of their script type in François Déroche, 'Les manuscrits arabes datés du IIIè/IXè siècle', *Revue des Etudes Islamiques* 55–7 (1987–9), pp. 343–79.

38 Judging from the drawing published by Déroche, the script of Topkapi A1, which has a *waqfiyya* of 299/912, fundamentally belongs to D.Va but has an affinity with D.III in the shape of independent *alif*. In the fragment dated 267/881, the curved serifs and the relatively straight

lower returns of final *nūn* make the writing style seem closer to D.II than D.I, the group to which it was previously ascribed by Déroche.

39 Cf. Déroche, 'The Qur'ān of Amājūr'.

40 References: Déroche 1983a = Déroche, *Les manuscrits du Coran I,1*; Déroche 1983b = François Déroche, 'Collections de manuscrits anciens du Coran à Istanbul: Rapport préliminaire' in Janine Sourdel-Thomine (ed.), *Etudes médiévales et patrimoine turc* (Paris, 1983), pp. 145–65; Déroche 1987–9 = Déroche, 'Les manuscrits arabes datés'; Déroche 1989 = François Déroche, 'A propos d'une série de manuscrits coraniques anciens' in François Déroche (ed.), *Les Manuscrits du Moyen-Orient* (Istanbul and Paris: Institut Français d'Etudes Anatoliennes, 1989), pp. 101–11; Déroche 1990–1 = François Déroche, 'The Qur'ān of Amājūr', *Manuscripts of the Middle East* 5 (1990–1), pp. 59–66; Moritz 1905 = Moritz, *Arabic Palaeography*; Rammah 1997 = Murād al-Rammāh, '*Tasāfir maktabat al-Qayrawān al-ʿatīqa*' in R. ʿInānī (ed.), *Dirāsāt al-makhṭūʿāt al-Islāmiyya bayn iʿtibārāt al-mādda waʾl-bashar* (London: Al-Furqān Islamic Heritage Foundation, 1997), pp. 135–50; Shabbūh 1956 = Shabbūh, '*Sijil qadīm*'.

41 See the reproduction in Déroche, 'Collections de manuscrits anciens', plate Ia.

42 Moritz, *Arabic Palaeography*, plate 42b.

43 The year was originally originally read as 329 by Amari before being changed to 229 by De Slane, *Catalogue des manuscrits arabes de la Bibliothèque Nationale* (Paris: Imprimerie Nationale, 1883–95), p. 95. In his catalogue of 1983, Déroche gave the date as 329 (p. 108), a reading which seems beyond doubt upon close observation of the actual manuscript.

44 Déroche has also mentioned (in *The Abbasid Tradition*, p. 37) a Qur'an in D.IV with a *waqfiyya* of 884, but this specimen was not precisely identified or published.

45 Abū'l-Faraj al-ʿUsh, Adnan Joundi and Bashir Zouhdi, *Catalogue du Musée National de Damas publié à l'occasion de son cinquantenaire* (Damascus: Publications de la direction générale des antiquités et des musées, 1969), fig. 127. An undated *waqfiyya* in style E.I also carries the name of one Abū al-Najm Badr al-Kabīr '*mawlā amīr al-muʾminīn*', who may have been the famous *wazīr* of the ʿAbbāsīd caliph al-Muʿtaḍid (Déroche, 'Collections de manuscrits anciens', p. 154, n. 1). If this identification is correct, it could provide an additional element of dating for this style as the latter figure died in 289/902; but this remains hypothetical.

46 Déroche, 'Collections de manuscrits anciens', plate Ib.

47 See George, *The Rise of Islamic Calligraphy*, p. 78. Although they fall outside the scope of the present paper, some Ḥijāzī manuscripts also have a script close to that of papyri and inscriptions of the first seven decades of Islam (cf. George, p. 32).

48 George, *The Rise of Islamic Calligraphy*, p. 32.

49 These inscriptions were initially published in Saʿd ibn ʿAbd al-ʿAzīz al-Rāshid (ed.), *Āthār minṭaqat Makka al-mukarrama*, vol. 2 '*Silsilat āthār al-mamlaka al-ʿArabiyya al-Saʿūdiyya*' (Riyāḍ, 2003), pp. 112–13. The one on the right of fig. 6 carries the date. Two more inscribed columns from the same group appear to be extant, see pp. 110–11.

50 F.I exhibits stylistic affinities with C in the shape of *nūn*, *hāʾ* and *lām-alif* and with B.II in the shape of final *jīm*; the closest epigraphic parallels to this style date to the second/eighth century (cf. Déroche, *The Abbasid Tradition*, p. 42, p. 46).

51 The information in this paragraph is chiefly derived from Sheridan Bowman, *Radiocarbon Dating* (London: British Museum Press, 1990).

52 Bowman, *Radiocarbon Dating*, p. 40.

53 Efim Anatolievich Rezvan, 'On the Dating of an "Uthmānic Qur'ān" from St Petersburg', *Manuscripta Orientalia* 6:3 (2000), pp. 19–22. In accordance with these results, Rezvan has

dated this manuscript to the late eighth century AD (p. 19); Déroche more generally proposed a date 'in the second/eighth century', while noting the link of some independent *alifs* to Hijāzī; see his 'Note sur les fragments coraniques anciens de Katta Langar (Ouzbékistan)', *Cahiers d'Asie Centrale* 7 (1999), pp. 65–73, p. 67.

54 See note 48 above.

55 On the development of calligraphy under the Umayyads and the likely time frame of the Hijāzī corpus, see George, *The Rise of Islamic Calligraphy*, chs 1–2.

56 George, *The Rise of Islamic Calligraphy*, p. 79.

57 George, *The Rise of Islamic Calligraphy*, pp. 79–89.

58 Yasin Dutton, 'An Umayyad Fragment of the Qur'an and its Dating', *Journal of Qur'anic Studies* 9:2 (2007), pp. 57–87.

59 Sotheby's (London), 13 October 2004, lot 3.

60 Christie's (London), 20 October 1992, lot 225.

61 For examples in C.Ia, see François Déroche and Almut von Gladiss, *Der Prachtkoran im Museum für Islamische Kunst : Buchkunst zur Ehre Allāhs*, Veröffentlichungen des Museums für Islamische Kunst, Bd. 3 (Berlin: Museum für Islamische Kunst, Staatliche Museen zu Berlin, Preussischer Kulturbesitz, 1999), p. 20 (Gotha, Forschungs- und Landesbibliothek, MS Or. A462); George, *The Rise of Islamic Calligraphy*, fig. 57 (Paris, Bibliothèque Nationale de France, Arabe 324c); Moritz, *Arabic Palaeography*, plates 1–12 (Cairo, Dār al-Kutub al-Miṣriyya, shelfmark unknown). For D.IV, see Moritz, *Arabic Palaeography*, plates 13–16 (Cairo, Mosque of Sayyidnā Ḥusayn); Nabil Safwat, Géza Fehérvári and Mohamed Zakariya, *The Harmony of Letters: Islamic Calligraphy from the Tareq Rajab Museum (Kuwait)* (Singapore: National Heritage Board, 1997), p. 29; Christie's (London), 19 October 1993, lots 29–30. The only published folio in the hand close to B.II is the one mentioned above (note 60). These three groups of folios belong to different parts of the Qur'an.

62 Moritz, *Arabic Palaeography*, plates 1–2, plates 5–6, plate 11; Déroche and Gladiss, *Der Prachtkoran*, p. 20; Norbert Nebes et al., *Orientalische Buchkunst in Gotha* (Gotha: Forschungs- und Landesbibliothek, 1997), fig. 53; George, *The Rise of Islamic Calligraphy*, fig. 57. All this decoration is from leaves in style C.Ia, but this does necessarily imply an overall pattern as other leaves in the same style have abstract sura markers, and these ornaments are stylistically close to the ones in the D.IV fragment; and as only three pages with sura markers belonging to the latter fragment have been published (Moritz, *Arabic Palaeography*, plates 13–16). On architectural decorations in Umayyad Qur'ans, see George, *The Rise of Islamic Calligraphy*, pp. 74–89.

63 Muḥammad ibn Ishāq al-Nadīm, *Kitāb al-fihrist*, ed. Riḍā Tajaddud (Tehran: Maṭba'at Dānishgāh, 1971), pp. 9–10.

64 A date in the first half of the third/ninth century and a Middle Eastern provenance were suggested by Déroche, *Le livre manuscrit arabe*, p. 69.

65 George, *The Rise of Islamic Calligraphy*, ch. 4.

66 George, *The Rise of Islamic Calligraphy*, pp. 143–4.

67 Tim Stanley, who was aware of this discrepancy, has tentatively raised the hypothesis of a tenth-century Hispano-Umayyad provenance for the Blue Qur'an, noting that a tendency towards archaism is manifested in the religious architecture of this dynasty ('The Qur'an on Blue Vellum', pp. 14–15). The mosaic inscriptions of the new *miḥrāb* at Cordoba (350–66/961–76) were notably executed in gold tesserae against dark blue and red grounds, as well as blue on a gold ground, in a clear reference to Umayyad art. But rather than produce exact replicas, medieval citations of earlier art like this one were filtered by contemporary idioms; at Cordoba, this is notably revealed by the accentuated angularity of the strokes and the

prominence of the serifs. The Blue Qur'an, by contrast, bears all the signs of an authentic early ʿAbbāsīd manuscript. Even if we assumed that luxury manuscripts with archaising tendencies were produced in the fourth/tenth century, the masterly D.I or a variation on the D.V sub-group would have been a more likely choice than a transitory script like D.IV. In NS manuscripts dating to the fourth/tenth century, beside numerous sura titles written in the same script as the text, some were also executed in a script that oscillates between D.I and D.V, but none in D.IV.

68 Compare, for example, the medallion from the Blue Qur'an in Stanley, 'The Qur'an on Blue Vellum', item 12 (right-hand side) with these examples in D.Va: Christie's (London), 14 October 1997, lot 44 (palmettes); Christie's (London), 25 November 1985, lot 81 (border).

69 Stanley, 'The Qur'an on Blue Vellum', p. 11.

70 See Christie's (London), 20 October 1992, lot 232, fols 52v–53r; Sotheby's (London), 16 October 1996, lot 8; Thomas Arnold and Adolf Grohmann, *The Islamic Book. A Contribution to its Art and History from the VII–XVIII Century* (Paris: Pegasus Press, 1929), plate 10. All of these manuscripts are written in D.III. A more remote comparison can be drawn with the gold illumination of a Qur'an fragment in D.Va sold at Sotheby's (London), 22 April 1999, lot 5.

71 See also Piotrovsky, *Earthly Beauty, Heavenly Art*, no. 55.

72 As already suggested by Stanley, 'The Qur'an on Blue Vellum', p. 11.

73 The Qur'an has 114 suras and the longest of them (*al-Baqara*) has 286 ayas: therefore the differences between the two *abjad* systems for numbers over 300 need not concern us here.

74 Bloom, 'al-Ma'mun's Blue Koran?', p. 63; Bloom, 'The Blue Koran', p. 97.

75 See Michael C.A. Macdonald, 'ABCs and Letter Order in Ancient North Arabian', *Proceedings of the Seminar for Arabian Studies* 16 (1986), pp. 101–68; Michael V. McDonald, 'The Order and Phonetic Value of Arabic Sibilants in the "abjad",' *Journal of Semitic Studies* 19 (1974), pp. 36–46.

76 Macdonald, 'ABCs and Letter Order', pp. 105–12. This graffito also displays some idiosyncratic features, such as the position of *lām* as the first letter, which may well reflect the particular mode of literacy of its engraver.

77 I am grateful to Olga Yastrebova (National Library of Russia) for communicating images of relevant pages to me.

78 George, *The Rise of Islamic Calligraphy*, p. 78; François Déroche, 'Colonnes, vases et rinceaux sur quelques enluminures d'époque omeyyade', *Comptes Rendus des Séances de l'Académie des Inscriptions et Belles Lettres* (2004), pp. 227–64, pp. 240–2. The evidence from Marcel 13 contradicts the statement by Theophanes the Confessor (d. 818), noted in previous discussions of the *abjad*, according to which al-Walīd 'forbade that the registers of the public offices should be written in Greek; instead, they were to be expressed in Arabic, except for the numerals, because it is impossible in their language to write a unit or a pair or a group of three or 8 ½ or 3 (?)'. If this statement has a factual basis, we can perhaps imagine that Greek letter numerals were maintained in the Umayyad administration to avoid ambiguities with the notation of words in Arabic, as suggested by Michael Macdonald ('ABCs and Letter Order', pp. 158–9, n. 158).

79 Al-Nadīm, *Kitāb al-fihrist*, p. 7.

80 Al-Dānī, *al-Muḥkam fī naqṭ al-maṣāḥif* (Damascus: Wizārat al-Thaqāfa wa'l-Irshād al-Qawmī, 1960), p. 34. Quṭrub died in Baghdad in 206/821 (G. Troupeau, art. 'Kuṭrub', *Encyclopaedia of Islam*, 2nd edn).

81 See David King, 'The Earliest Astrolabes from Iraq and Iran (ca 850 to ca 1100)' in his *In Synchrony with the Heavens: Studies in Astronomical Timekeeping and Instrumentation*

in *Medieval Islamic Civilization* (2 vols, Leiden: Brill, 2005), vol. 2, pp. 439–544. Note in particular the reproductions of the rim of the *mater* in the two astrolabes by Khafif (fig. 1.1, fig. 1.3) and the biographical information about him (pp. 453–4). Another extant astrolabe is thought to be earlier than the above two: see David King, 'The Oldest Astrolabe in the World, from 8th-century Baghdad', also in his *In Synchrony with the Heavens*, vol. 2, pp. 403–39. Its dating by David King is based on the state of astronomical knowledge that it reflects, rather than positive evidence; the quality of the only published images is too poor to allow a reading of its *abjad* numerals. The fate of the object after the looting of the Museum of Baghdad, to which it belonged until 2003, is unknown.

82 See McDonald, 'The Order and Phonetic Value'; M.C.A. Macdonald, 'On the Placing of ṣ in the Maghribī *abjad* and the Khirbet al-Samrā' ABC', *Journal of Semitic Studies* 37 (1992), pp. 155–66; Henry Churchyard, 'Early Arabic *siin* and *shiin* in Light of the Proto-Semitic Fricative-lateral Hypothesis' in Mushira Eid and Clive Holes (eds), *Perspectives on Arabic Linguistics V: Papers from the Fifth Annual Symposium on Arabic Linguistics*, Amsterdam Studies in the Theory and History of Linguistic Science, 101 (Amsterdam and Philadelphia: J. Benjamins, 1993), pp. 313–42.

83 For example Christie's (London), 4 July 1985, lot 69 (B.II); Khader Ibrahim Salameh, *The Qur'an Manuscripts in the al-Ḥaram al-Sharīf Islamic Museum, Jerusalem* (London and Paris: Garnet and UNESCO, 2001), p. 54; Boisgirard, Hôtel Drouot (Paris), 28 April 1997, lot 34; Sotheby's (London), 25 April 2002, lot 2 (C.III, all three folios from the same manuscript).

84 One example of the 'eastern' *abjad* being used for verse numbering is the famous Qur'an written in five lines of gold D.Va to the page, cf. Sotheby's (London), 3 May 2001, lot 2, where a *sin* appears for 60. In the rest of D.V and of the D styles, except D.IV, these numbers are normally written in full letters.

85 For images, see Déroche, *The Abbasid Tradition*, no. 81.

86 One possible exception is a folio sold at Bonhams (London), 11 October 2000, lot 5, where a roundel with a *ʿayn* (which stands for 70 in *abjad* notation) can be seen in the margin at the seventy-first aya.

87 Al-Bīrūnī, *The Book of Instruction in the Elements of the Art of Astrology* (*Taḥḥīm li-awā'il ṣināʿat al-tanjīm*), tr. Robert Ramsay Wright (London: Luzac, 1934), p. 41. The phrase *ta'wīlāt li-aghṛāḍ fi i'tiqād* was translated by Wright as 'religious grounds', but it seems to have a more general meaning here.

88 The presence of ruling in the manuscript has been interpreted by Stanley ('The Qur'an on Blue Vellum', p. 12) as reflecting a Spanish origin, because later Maghribī manuscripts tend to be ruled; while Sheila Blair saw the same feature as evidence of a relatively late date, since it is generally absent in Kufic – cf. her *Islamic Calligraphy* (Edinburgh: Edinburgh University Press, 2006), p. 45, p. 127. But a simpler explanation can be proposed: the blue dye would have prevented the use, as in other Kufic manuscripts, of a template grid viewed by transparency through the parchment, hence the need to draw actual lines; cf. George, 'The Geometry of Early Qur'anic Manuscripts', p. 103.

89 As remarked on by Bloom, 'The Early Fatimid Blue Koran Manuscript', pp. 175–6; see also Fraser and Kwiatkowski, *Ink and Gold*, pp. 44–8.

90 44 folios from the Sinope Gospels (Greek) are extant at the Bibliothèque Nationale de France (suppl. grec. 1286). In Greek, the Rossano Gospels (Rossano, Museo Diocesano), *Codex Caesariensis* (dispersed, largest fragment now in St Petersburg, National Library of Russia, Gr. 537), Berat Gospels (Tirana, Albanian National Archives, No. 1), *Codex Argenteus* (Uppsala, University Library) and Vienna Genesis (Vienna, Österreichische Nationalbibliothek, Cod. theol. gr.31) were written in silver; among the earliest Latin examples are the *Codex*

Brixianus (Brescia, Biblioteca Civica Queriniana) and the St Germain Psalter (Paris, Bibliothèque Nationale de France, Latin 11947). Several of these manuscripts are published in Michelle Brown (ed.), *In the Beginning: Bibles Before the Year 1000* (Washington DC: Freer Gallery of Art and Arthur M. Sackler Gallery, 2006).

91 Greek examples of the ninth and tenth centuries AD include the Naples Lectionary (Naples, Biblioteca Nazionale, suppl. grec. 12); the Sinai Lectionary (Sinai, Monastery of St Catherine, Gr. 204), the *Codex Aureus Anthimi* (Tirana, Albanian National Archives, no. 2) and St Petersburg, Public Library, Gr. 53. Purple dyes also continued to be used, while often leaving the margins blank, in such Latin manuscripts as the Godescalc Gospels (781–3 AD) and *Codex Aureus* (870 AD), both of which are Carolingian.

92 Josef von Karabacek, *Arab Paper*, tr. Don Baker and Suzy Dittmar (London: Archetype, 2001), p. 48; Bloom, 'The Blue Koran', p. 98. The document is ambiguously described as being dyed in 'the colour of the sky' (*maṣbūgh samāʿī*) in the sources: this could either mean blue or, as argued by Karabacek, 'hyacinth purple'.

93 Cf. Karl Leyser, *Communications and Power in Medieval Europe: The Carolingian and Ottonian Centuries*, ed. Timothy Reuter (London: Hambledon, 1994), p. 152.

94 On imperial gift exchange in this period, see Leslie Brubaker, 'The Elephant and the Ark: Cultural and Material Interchange across the Mediterranean in the Eighth and Ninth Centuries', *Dumbarton Oaks Papers* 58 (2004), pp. 175–95; Anthony Cutler, 'Gifts and Gift Exchange as Aspects of the Byzantine, Arab, and Related Economies', *Dumbarton Oaks Papers* 55 (2001), pp. 247–78; and Anthony Cutler, 'Significant Gifts: Patterns of Exchange in Late Antique, Byzantine, and Early Islamic Diplomacy', *Journal of Medieval and Early Modern Studies* 38:1 (2008), pp. 79–101.

95 Clark et al., 'Indigo, Woad and Tyrian Purple', p. 196.

96 For example, St Petersburg, Public Library, Gr. 53, a manuscript of the ninth or tenth century AD with bluish to violet parchment; cf. Vera Likhachova, *Vizantiiskaia miniatiura: Pamiatniki vizantiiskoi miniatury IX-XV vekov v sobraniiax sovetskogo soiuza / Byzantine Miniature, Masterpieces of Byzantine miniature of IXth-XVth centuries in Soviet collections* (Moscow: Iskusstvo, 1977), plates 3–4.

97 Meyer Reinhold, *History of Purple as a Status Symbol in Antiquity*, Collection Latomus (Brussels: Latomus, 1970), p. 68.

98 For images, see John Lowden, *Early Christian and Byzantine Art* (London: Phaidon, 1997), fig. 72, fig. 79, fig. 85.

99 Cyril Mango, *The Art of the Byzantine Empire (312–1453): Sources and Documents* (Englewood NJ: Prentice-Hall, 1973), pp. 88–9. In the ninth century AD, Agnellus also described sixth- and ninth-century altar cloths of purple and gold at the churches of Ravenna (see Mango, pp. 105–7).

100 Photius, *The Homilies of Photius, Patriarch of Constantinople*, Translated by Cyril Mango, *Dumbarton Oaks Studies* 3 (Cambridge MA: Harvard University Press, 1958), p. 148, and also p. 175; for John of Damascus, see Maria Evangelatou, 'The Purple Thread of the Flesh' in Anthony Eastmond and Liz James (eds), *Icon and Word: The Power of Images in Byzantium* (Aldershot: Ashgate, 2003), pp. 261–79, p. 265, p. 269. See also her note 36 (p. 273) for references to further authors.

101 Mango, *The Art of the Byzantine Empire*, p. 108.

102 Paris, Bibliothèque Nationale de France, Latin 1203, fol. 126v. I thank Charlotte Denoël, keeper of Latin manuscripts at the Bibliothèque Nationale, for communicating this text to me.

103 Albert Dietrich, art. 'Ṣadaf' in *Encyclopaedia of Islam*, 2nd edn.

104 In her recent experiments, Kanold has succeeded in dyeing a parchment leaf in high-grade purple with only 30 murex glands; the solution in which it had been dipped was not depleted by this operation, and Kanold's other experiments suggest that the vat could be re-activated by feeding it with dried glands ('The Purple Fermentation Vat', pp. 152–3). Compare these results, for example, with the figure of 10,000 snails to a gram of purple dye put forward by Patrick E. McGovern and Rudolph H. Michel, 'Royal Purple Dye: The Chemical Reconstruction of the Ancient Mediterranean Industry', *Accounts of Chemical Research* 23:5 (May 1, 1990), pp. 152–8, pp. 152–3.

105 David Jacoby, 'Silk Economics and Cross-Cultural Artistic Interaction: Byzantium, the Muslim World, and the Christian West', *Dumbarton Oaks Papers* 58 (2004), pp. 197–240, p. 211.

106 François Déroche, *Les manuscrits du Coran. Du Maghreb à l'Insulinde*. Catalogue des manuscrits arabes, Deuxième partie: manuscrits musulmans, Tome I, 2 (Paris: Bibliothèque Nationale de France, 1985), nos 305–8, pp. 36–7; Déroche, *Le livre manuscrit arabe*, p. 78, p. 99; Marie-Geneviève Guesdon and Annie Vernay-Nouri, *L'art du livre arabe. Du manuscrit au livre d'artiste* (Paris: Bibliothèque Nationale de France, 2001), no. 25.

107 I am grateful to Patricia Roger (Institut de Recherche sur les Archéomatériaux, CNRS Orléans, France) for this information, based on the analysis of twelve folios from Arabes 389 and 390 at that laboratory. The absorption curve of the diffuse reflection spectrum did not suggest the presence of purple in this manuscript; the alternative hypothesis of a mixture of colouring agents including murex purple was also ruled out by the absence of bromine (a constituent of natural purple) from the X-ray fluorescence spectra.

108 On the Baysān inscription, see Elias Khamis, 'Two Wall Mosaic Inscriptions from the Umayyad Market Place in Bet Shean/Baysān', *Bulletin of the School of Oriental and African Studies* 64:2 (2001), pp. 159–76. Textual references to the Umayyad inscriptions at Damascus and Medina are listed in the same article (p. 171).

109 For colour images, see George, *The Rise of Islamic Calligraphy*, fig. 37; Oleg Grabar, *The Dome of the Rock* (Cambridge, MA: The Belknap Press of Harvard University Press, 2006), fig. 33.

110 George, *The Rise of Islamic Calligraphy*, ch. 2.

111 As noted by Stanley ('The Qur'an on Blue Vellum', p. 14), al-Nadīm may arguably have been referring to such a transfer when he wrote that the calligrapher responsible for the inscriptions at the Umayyad mosque of Medina, Khālid ibn Abī al-Hayyāj, was asked by 'Umar ibn 'Abd al-'Azīz to write 'a manuscript on this model' (on this passage, see also George, *The Rise of Islamic Calligraphy*, pp. 74–5). An ambiguity remains as to whether this reference is simply to the appearance of the script or also to the colour scheme; at any rate, because the anecdote was written in the late fourth/tenth century without citing a source, it cannot provide reliable evidence about the early second/eighth century.

112 Few pre-Islamic examples of gold inscriptions on blue in the Byzantine tradition have survived the iconoclast crisis of the eighth century AD, but see the early church inscriptions of Rome, Ravenna and Poreč (sixth century AD), for example, in Lowden, *Early Christian and Byzantine Art*, fig. 64, figs 84–5; Walter Fraser Oakeshott, *The Mosaics of Rome: From the Third to the Fourteenth Centuries* (London: Thames & Hudson, 1967), fig. 77, fig. 87, etc. The apse mosaic inscriptions at the monastery of St Catherine (Mount Sinai, sixth century AD) are written in blue on gold, with a few words in the reverse colour pattern (fig. 15). Excavations at the church of St Polyeuktos (Constantinople, 524–7 AD) have also revealed traces of a blue ground for the dedicatory inscription, though the text itself is presently in the natural colour of the marble; see Richard Martin Harrison, *A Temple for Byzantium: The Discovery and Excavation of Anicia Juliana's Palace-church in Istanbul* (London: Harvey Miller, 1989), pp. 84–7.

113 See also Déroche, *The Abbasid Tradition*, no. 19 (ascribed by Déroche to D.I, but possibly closer to D.Va); Sotheby's (London), 12 October 2000, lot 3 (D.IV); Christie's (London), 24 April 1990, lot 157 (NS.III); David Storm Rice, *The Unique Ibn al-Bawwāb Manuscript in the Chester Beatty Library* (Dublin: Emery Walker, 1955), plate XVI (cursive, 1026 AD).

114 Al-Azraqī, *Kitāb akhbār Makka*, ed. Ferdinand Wüstenfeld, *Die Chroniken der Stadt Mekka* Bd. I (Leipzig: Brockhaus, 1858), p. 309.

115 Al-Azraqī, *Kitāb akhbār Makka*, pp. 311–12. Al-Khaṭīb al-Baghdādī (d. 463/1071), in his account of al-Manṣūr's mosque in the round city of Baghdad, cites the text of the inscription but regrettably does not provide any information about its form.

116 On this issue, see Khalil 'Athamina, 'The Black Banners and the Socio-political Significance of Flags and Slogans in Medieval Islam', *Arabica* 36:3 (1989), pp. 307–26.

117 Al-Samhūdī, *Wafā' al-wafā' bi-akhbār Dār al-muṣṭafā*, ed. Qāsim al-Samarrā'ī (5 vols, London: Al-Furqān Islamic Heritage Foundation, 2001), vol. 2, p. 296. It is not entirely clear, from al-Samhūdī's presentation of this information, whether he is citing or paraphrasing Ibn Zabāla.

118 Al-Samhūdī, *Wafā' al-wafā'*, vol. 2, p. 457 (direct citation from Ibn Zabāla).

119 Al-Samhūdī, *Wafā' al-wafā'*, vol. 2, p. 457.

120 Ibn Shabbah, *Tārīkh al-Madīna al-munawwara* (4 vols, Beirut: Dār al-Turāth, 1990), vol. 1, p. 8; also in al-Samhūdī, *Wafā' al-wafā'*, vol. 2, p. 457. The account is cited on the authority of a certain Muḥriz ibn Thābit, *mawlā* of Salama ibn 'Abd al-Malik.

121 George, *The Rise of Islamic Calligraphy*, pp. 74–89.

122 George, *The Rise of Islamic Calligraphy*, p. 86.

123 For plans of this mosque, see Jean Sauvaget, *La mosquée omeyyade de Médine. Etude sur les origines architecturales de la mosquée et la basilique* (Paris: Vanoest, 1947), esp. fig. 5.

124 Al-Ṭurṭushī, *Kitāb al-ḥawāḍith wa'l-bida'*, ed. 'Abd al-Majīd Turkī (Beirut: Dār al-Gharb al-Islāmī, 1990), no. 184, no. 272.

125 '*Lā tuktab al-maṣāḥif bi'l-dhahab wa-lā tu'ashshar bihi wa-lā tuzawwag*'. Cited from Mālik's *Mukhtaṣar mā laysa fī'l-mukhtaṣar* by al-Ṭurṭushī (*Kitāb al-ḥawāḍith*, no. 272). '*Lā tu'ashshar bihi*' was previously translated into '[Mālik forbade] the division of Qur'ānic text into ten parts' by Maribel Fierro, 'The Treatises against Innovations (*kutub al-bida'*)', *Der Islam* 69 (1992), pp. 204–46, p. 215. However the presence of the word '*bihi*' signals an action performed with gold, which makes this reading unlikely.

126 On Nuruosmaniye MS 27 and related fragments, see Déroche, *The Abbasid Tradition*, no. 41; Fraser and Kwiatkowski, *Ink and Gold*, no. 5, esp. n. 1.

127 Ibn Rusta, *al-A'lāq al-naḥḥa*, ed. M.J. De Goeje, *Bibliotheca geographorum Arabicorum* 7 (Leiden: Brill, 1892), pp. 74–5.

128 This possibly refers to the older mosaic ornament on this wall.

129 Max Van Berchem, *Matériaux pour un corpus inscriptionum arabicarum. Deuxième partie, Syrie du Sud. Tome deuxième, Jérusalem Haram I*, Mémoires publiés par les membres de l'Institut Français d'Archéologie du Caire (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1927), pp. 236–8.

130 See Thomas Leisten, *Excavation of Samarra: Volume I, Architecture. Final Report of the First Campaign, 1910–1912*, *Baghdader Forschungen* Bd. 20 (Mainz am Rhein: Philipp von Zabern, 2003), p. 46; Ernst Herzfeld, 'Expedition Samarra', *Der Islam* 3 (1912), pp. 314–6, p. 316; Ernst Herzfeld, *Erster Vorläufiger Bericht über die Ausgrabungen von Samarra* (Berlin: Dietrich Reimer, 1912), p. 8.

131 Al-Muqaddasī, *Aḥsan al-taqāsīm fī maʿrifat al-aqālīm*, ed. M.J. De Goeje, Bibliotheca geographorum Arabicorum 3 (Leiden: Brill, 1906), p. 122; see also the remarks by Ernst Herzfeld in 'Expedition Samarra'; and K.A.C. Creswell, *Early Muslim Architecture. Volume II: Early ʿAbbāsids, Umayyads of Cordova, Aghlabids, Ṭūlūnids and Samānids, A.D. 751–905*, 2nd edn (Oxford: Oxford University Press, 1969), p. 258.

132 See, however, the link with Ibn al-Mudabbir tentatively proposed by William Popper, *The Cairo Nilometer: Studies in Ibn Taghribirdī's Chronicles of Egypt: I* (Berkeley: University of California Press, 1951), pp. 22–3.

133 For a detailed discussion, see Popper, *The Cairo Nilometer*, pp. 20–2, pp. 49–56.

134 Ibn Khallikān, *Wafayāt al-aʿyān wa-anbāʾ abnāʾ al-zamān*, ed. Iḥsān ʿAbbās (8 vols, Beirut: Dār Ṣādir, 1970), vol. 3, pp. 113–14; translation after Creswell, *Early Muslim Architecture II*, pp. 297–8. Strictly speaking, the pigment extracted from lapis lazuli is ultramarine, but Arabic sources, especially those describing artefacts, seem to use this as a generic term for dark blue rather than a specific material.

135 Traces of the coloured ground can faintly be seen in Kamel Osman Ghaleb Pacha, *Le mikyās ou nilomètre de l'île de Rodah*, Mémoires présentés à l'Institut d'Égypte, LIV (Cairo: Imprimerie de l'Institut Français d'Archéologie Orientale, 1951), plate IV.1, plate V.2. These were also mentioned by Doris Behrens-Abouseif, who assumed that the text itself was originally in the natural colour of the marble, as it is today; see her *Islamic Architecture in Cairo: An Introduction* (Leiden: Brill, 1989), p. 51.

136 Examples of white inscriptions on a blue ground to which the factor of legibility may be relevant can be found at Qūṣayr ʿAmra (most notably in the arch above the enthroned ruler); in the window grilles of the mosque of Ibn Ṭūlūn; at Ṣabra-Manṣūriyya, the city founded around 334–6/945–8 near Qayrawān by the Fāṭimid caliph al-Manṣūr; and in the gate inscriptions of the Great Mosque of Cordoba which belong to the extension of the *wazīr* al-Manṣūr in 377/987.

137 The translation used in the present article is by A.J. Arberry. The other Qur'anic ayas cited by Ibn Khallikān as belonging to the Nilometer are Q. 14:37, Q. 22:5, Q. 22:62 and Q. 50:9, all of which are about the divine blessing of rain, and the 'Verse of the Throne' (Q. 2:255).

138 Cited in Abū'l-ʿAbbās Aḥmad al-Qalqashandī (d. 821/1418), *Subḥ al-aʿshā* (14 vols, Cairo: Dār al-Kutub al-Khadawiyya, 1913), vol. 5, p. 7.

139 See Muhammad Qasim Zaman, *Religion and Politics under the Early ʿAbbāsids: The Emergence of the Proto-Sunni Elite* (Leiden: Brill, 1997).

140 For the secular dimension of this problem, see G.H.A. Juynboll, 'The Attitude Towards Gold and Silver in Early Islam' in Michael Vickers (ed.), *Pots & Pans: A Colloquium on Precious Metals and Ceramics*, Oxford Studies in Islamic Art, III (Oxford: Oxford University Press, 1986), pp. 107–15.

141 Ibn Abī Dāwūd, *Kitāb al-maṣāḥif*, p. 150. The phrase given here as 'you will be obliterated' is *'fa ʿalaykum al-dithār'*, which could also have a connotation of superficiality.

142 Ibn Abī Dāwūd, *Kitāb al-maṣāḥif*, p. 151. The same *khavar* is cited on the authority of several chains of transmission, with variants in wording. The 'ʿAbd Allāh' in question is not identified, but is presumably one of the four major early transmitters who carried this name: Ibn ʿUmar, Ibn ʿAbbās, Ibn ʿAmr or Ibn al-Zubayr.

143 Ibn Abī Dāwūd, *Kitāb al-maṣāḥif*, p. 152. This anecdote is cited twice following two different *asānīd*, again with differences in wording.

144 See also Q. 3:14; Q. 3:91.

145 See also Q. 18:31; Q. 35:33; Q. 43:71; Q. 76:21 (where silver alone is mentioned).

146 See M.J. Kister's review of the 1959 Arabic edition of al-Ṭurṭūshī's *al-Hawādith wa'l-bida'* in *Journal of Semitic Studies* 6:1 (1961), pp. 137–42, p. 138.

147 Ibn Abī Dāwūd, *Kitāb al-maṣāḥif*, p. 152. The identity of the ʿAbd Allāh in question is, again, unclear – see note 142 above. The word *ʿilāqa* literally means 'strap', though it may refer to the whole binding here.

148 For a convenient introduction, see Harold Osborne, art. 'Colour' in Hugh Brigstocke (ed.), *The Oxford Companion to Western Art* (Oxford University Press, 2001).

149 For general overviews of colour in Islam, see A. Morabia, art. 'Lawn' in *Encyclopaedia of Islam*, 2nd edn; A. Morabia, 'Recherches sur quelques noms de couleur en arabe classique', *Studia Islamica* 21 (1964), pp. 61–99; Andrew Rippin, art. 'Colors' in *Encyclopaedia of the Qurʾān*. On colour in Byzantine culture, see Liz James, *Light and Colour in Byzantine Art* (Oxford: Clarendon Press, 1996).

150 Morabia, 'Recherches sur quelques noms', p. 75.

151 Edward William Lane, *Arabic-English Lexicon* (8 vols, London: Williams and Norgate, 1863), vol. 1, p. 283.

152 Morabia, 'Recherches sur quelques noms', p. 79; Lane, *Lexicon*, vol. 2, p. 756.

153 Alphonse Mingana, *The Book of Treasures by Job of Edessa: Encyclopedia of Philosophical and Natural Sciences as Taught in Baghdad about A.D. 817* (Cambridge: W. Heffer & Sons, 1935), p. 130.

154 Al-Ṭabarī, *Firdaws al-ḥikma fī'l-ṭibb*, ed. Muḥammad Zubayr al-Siddiqī (Berlin: Maṭbaʿat Afitāb, 1928), p. 363. On the biography of the author, see David Thomas, art. 'al-Ṭabarī, ʿAlī b. Rabban' in *Encyclopaedia of Islam*, 2nd edn; al-Nadīm, *Kitāb al-fihrist*, p. 354.

155 Al-Ṭabarī, *Firdaws al-ḥikma*, p. 364.

156 Cf. Jamal Elias, art. 'Light' in *Encyclopaedia of the Qurʾān*. As noted by Elias, the antithesis is repeatedly stated in the phrase 'from the darkness into the light' (*min al-ẓulumāt ilā'l-nūr*), as in Q. 2:257; Q. 5:16; Q. 14:1; Q. 33:43; Q. 57:9; and Q. 65:11.

157 See also Q. 4:174, *O men, a proof has now come to you from your Lord; We have sent down to you a manifest light (nūr mubīn)*; Q. 5:15, *There has come to you from God a light and a book manifest (kitāb mubīn)*; Q. 7:157, *Those who believe in him and succour him and help him, and follow the light that has been sent down with him – they are the prosperers*. In one aya (Q. 33:46), the Prophet himself is depicted as a 'light-giving lamp' (*sirāj munīr*). As remarked by Jamal Elias (art. 'Light'), the expressions *kitāb mubīn* and *āyāt bayyināt*, which recur frequently, also 'carry a connotation of being "lit up"'

158 Amikam Elad, 'Why Did ʿAbd al-Malik Build the Dome of the Rock? A Re-examination of the Muslim Sources' in Julian Raby and Jeremy Johns (eds), *Bayt al-Maqdis: ʿAbd al-Malik's Jerusalem*, Oxford Studies in Islamic Art 9.1 (Oxford: Oxford University Press, 1992), pp. 33–58, pp. 35–6. Ibn al-Jawzī states (p. 34) that Muḥammad ibn al-Sāʿib received this account from his father; parts of it, he adds, were also given by al-Wāqidī (d. 207/823) and others.

159 Elad, 'Why Did ʿAbd al-Malik Build the Dome of the Rock?', p. 36.

160 Al-Nābigha al-Shaybānī, *Dīwān*, ed. ʿUmar Fārūq Ṭabbāʿ (Beirut: Dār al-Arqam, 1996), pp. 102–3; translation after Henri Lammens, *Etudes sur le siècle des Omayyades* (Beirut: Imprimerie Catholique, 1930), pp. 300–1. On al-Nābigha, see also Julie Scott Meisami and Paul Starkey (eds), *Encyclopedia of Arabic Literature* (2 vols, London: Taylor & Francis, 1998), vol. 2, p. 571.

161 See Sauvaget, *La mosquée omeyyade de Médine*, pp. 81–2.

162 Sauvaget, *La mosquée omeyyade de Médine*, pp. 78–80. According to Ibn Rusta (*al-Aʿlāq al-naḥḥiyya*, p. 70), its gold mosaic inscription on a blue ground, also placed on the *qibla* wall,

began with the *Fātiḥa* and continued with *By the sun in its morning brightness ...* (Q. 91:1) whence it ran until the end of the Qur'an: it must thus have contained a wide array of references to light, such as *By the night enshrouding, and the day in splendour* (Q. 92:1); *By the morning brightness and by the night when it grows still* (Q. 93:1). References to night and day also appeared in the original mosaic inscription at Damascus, but in a less consistent manner: for a full transcription, see Barry Flood, *The Great Mosque of Damascus: Studies in the Makings of an Umayyad Visual Culture* (Leiden: Brill, 2000), pp. 247–51. The opening sentence of the copper plaque from the east gate at the Dome of the Rock also proclaims that 'God is ... the light of heaven and earth'; transcription in Oleg Grabar, *The Shape of the Holy: Early Islamic Jerusalem* (Princeton, NJ: Princeton University Press, 1996), p. 186. On lighting and incense under the 'Abbāsids, see also Johannes Pedersen, art. 'Masdjid', in *Encyclopaedia of Islam*, 2nd edn, parag. D.2.h.

163 I was recently able to observe the manuscript in similar conditions, but under artificial light, at the Chester Beatty Library.

164 To give but one example, in his poem for the rededication of Hagia Sophia in 562 AD, Paulus Silentiarius writes: 'The roof is compacted of gilded tesserae from which a glittering stream of golden rays pours abundantly and strikes men's eyes with irresistible force. It is as if one were gazing at the midday sun in spring when it gilds each mountain top' (Mango, *The Art of the Byzantine Empire*, p. 86).

165 See also Jerzy Miziołek, 'Transfiguratio Domini in the Apse at Mount Sinai and the Symbolism of Light', *Journal of the Warburg and Courtauld Institutes* 53 (1990), pp. 42–60; James, *Light and Colour in Byzantine Art*, p. 120.

166 The Transfiguration is represented in these colours in early church mosaics from Rome, such as Santi Cosma e Damiano (526–30 AD), Santa Cecilia in Trastevere and Santa Prassede (both ninth century AD). Gold on blue also appears, for example, in the Ascension scene of the Rabbūlā Gospels (586 AD); in the Sinai icons of the *Theotokos* and Child (sixth century AD) and Ascension (seventh century AD); in mosaic depictions of the same theme at the churches of St Sophia in Thessaloniki (787–97 AD) and Constantinople (867 AD); and in numerous early mosaics of the Cross.

167 Elizabeth ten Grotenhuis, *Japanese Mandalas: Representations of Sacred Geography* (Honolulu: University of Hawaii Press, 1999), p. 81.

168 Joseph Needham and Wang Ling, *Science and Civilisation in China. Volume I: Introductory Orientations* (Cambridge: Cambridge University Press, 1954), 179, 236.

169 See also the earlier table in Bloom, 'The Blue Koran', p. 99.